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PROCEEDINGS  
OF THE  
CONNECTICUT  
STATE MEDICAL SOCIETY  
1913

121st ANNUAL CONVENTION

HELD AT

HARTFORD, MAY 21st and 22d

---

*EDITOR*

MARVIN McR. SCARBROUGH

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*PUBLISHED BY THE SOCIETY*

The Connecticut State Medical Society does not hold itself responsible for the opinions contained in any article unless such opinions are indorsed by special vote. All communications intended for the Connecticut State Medical Society should be addressed to M. M. Scarbrough, M.D., New Haven, Conn.

The next annual meeting of the Connecticut State Medical Society will be held in New Haven, May 20th and 21st, 1914.

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# OFFICERS OF THE SOCIETY.

1913-1914

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## *President.*

D. CHESTER BROWN, M.D., Danbury.

## *Vice-Presidents.*

WILLIAM S. HULBERT, M.D., Winsted.

KATE C. MEAD, M.D., Middletown.

## *Secretary.*

MARVIN McR. SCARBROUGH, M.D., New Haven.

## *Treasurer.*

JOSEPH H. TOWNSEND, M.D., New Haven.

# COMMITTEES.

---

## STANDING COMMITTEES.

---

### COMMITTEE ON SCIENTIFIC WORK.

Walter R. Steiner.                      George Blumer.  
The Secretary.

### COMMITTEE ON MEDICAL EXAMINATIONS AND MEDICAL EDUCATION.

J. Francis Calef.                      Charles A. Tuttle.  
Walter L. Barber.                      Samuel M. Garlick.  
John B. McCook.

### COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Everett J. McKnight.                      William B. Cogswell.  
Charles J. Foote.                      Elias Pratt.  
Rush W. Kimball.                      Seldom B. Overlock.  
Charles E. Stanley.                      Eli P. Flint.  
The President.                      The Secretary.

### COMMITTEE ON HONORARY MEMBERS AND DEGREES.

Frank K. Hallock.                      Seldom B. Overlock.  
Edw. T. Bradstreet.

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## SPECIAL COMMITTEES.

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### COMMITTEE ON A SANATORIUM FOR THE NERVOUS POOR.

Rienzi Robinson.                      John L. Buel.  
Henry S. Noble.                      George Blumer.  
Frederick T. Simpson.

### COMMITTEE ON A STATE FARM FOR INEBRIATES.

Frank H. Barnes.                      Charles J. Bartlett.  
Robert L. Rowley.                      Daniel C. Patterson.  
Arthur B. Coleburn.

COMMITTEE ON THE MEDICAL INSPECTION OF SCHOOLS.

Edward W. Goodenough.	Thomas G. Sloan.
Charles P. Botsford.	Joseph H. Townsend.
William B. Cogswell.	

COMMITTEE ON NATIONAL LEGISLATION.

Everett J. McKnight.

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DELEGATES.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Everett J. McKnight.  
D. Chester Brown.

DELEGATES TO STATE ASSOCIATIONS.

MAINE.

Frederick T. Simpson, Hartford. James M. Keniston, Middletown.

NEW HAMPSHIRE.

Charles C. Gildersleeve, Norwich. Wm. B. Cogswell, Stratford.

VERMONT.

Harmon G. Howe, Hartford. C. J. Bartlett, New Haven.

MASSACHUSETTS.

W. H. Donaldson, Fairfield. Everett J. McKnight, Hartford.

RHODE ISLAND.

Robert C. Paine, Thompson. A. N. Phillips, Stamford.

NEW YORK.

George Blumer, New Haven. Rush W. Kimball, Norwich.

NEW JERSEY.

Patrick Cassidy, Norwich. Harold S. Arnold, New Haven.

PENNSYLVANIA.

W. H. Carmalt, New Haven. Burton I. Tolles, Ansonia.

# HOUSE OF DELEGATES.

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## COUNCILORS.

---

HARTFORD COUNTY.

OLIVER C. SMITH (reëlected).

NEW HAVEN COUNTY.

WILLIAM H. CARMALT.

NEW LONDON COUNTY.

PATRICK J. CASSIDY (reëlected).

FAIRFIELD COUNTY.

SAMUEL M. GARLICK.

WINDHAM COUNTY.

SELDON B. OVERLOCK.

LITCHFIELD COUNTY.

ELIAS PRATT.

MIDDLESEX COUNTY.

GEORGE N. LAWSON (reëlected).

TOLLAND COUNTY.

THOMAS F. ROCKWELL.

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## DELEGATES.

---

HARTFORD COUNTY.

Paul P. Swett.

Frank L. Waite.

Erastus P. Swasey.

Frederick B. Willard.

Charles D. Alton.

Thomas G. Alcorn.

Myron P. Robinson.

NEW HAVEN COUNTY.

Ralph A. McDonnell.	Frank N. Loomis.
Frank H. Wheeler.	Gustavus Eliot.
Frederick N. Sperry.	Oliver T. Osborne.
Charles S. Rodman.	

NEW LONDON COUNTY.

Charles B. Graves.	George Thompson.
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FAIRFIELD COUNTY.

Charles W. Gardner.	Eli B. Ives.
George R. Hertzberg.	David B. Wason.
George W. Osborn.	Frank M. Tukey.

WINDHAM COUNTY.

John B. Kent.	George Barnes.
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LITCHFIELD COUNTY.

Francis S. Skiff.	Ralph S. Goodwin.
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MIDDLESEX COUNTY.

Kate C. Mead.	Daniel A. Nolan.
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TOLLAND COUNTY.

William L. Higgins.

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**STANDING COMMITTEES.**

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COMMITTEE ON SCIENTIFIC WORK.

Walter R. Steiner.	George Blumer.
The Secretary.	

COMMITTEE ON MEDICAL EXAMINATIONS AND MEDICAL EDUCATION.

J. Francis Calef.	Charles A. Tuttle.
Walter L. Barber.	Samuel M. Garlick.
John B. McCook.	

## COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Everett J. McKnight.	William B. Cogswell.
Charles J. Foote.	Elias Pratt.
Rush W. Kimball.	Seldon B. Overlock.
Charles E. Stanley.	Eli P. Flint.
The President.	The Secretary.

## COMMITTEE ON HONORARY MEMBERS AND DEGREES.

Frank K. Hallock.	Seldom B. Overlock.
Edw. T. Bradstreet.	

## COMMITTEE OF ARRANGEMENTS.

Everett J. McKnight.	Charles D. Alton.
Edward R. Thompson.	

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SPECIAL COMMITTEES.

## COMMITTEE ON A SANATORIUM FOR THE NERVOUS POOR.

Rienzi Robinson.	John L. Buel.
Henry S. Noble.	George Blumer.
Frederick T. Simpson.	

## COMMITTEE ON A STATE FARM FOR INEBRIATES.

Frank H. Barnes.	Charles J. Bartlett.
Robert L. Rowley.	Daniel C. Patterson.
Arthur B. Coleburn.	

## COMMITTEE ON THE MEDICAL INSPECTION OF SCHOOLS.

Edward W. Goodenough.	Thomas G. Sloan.
Charles P. Botsford.	Joseph H. Townsend.
William B. Cogswell.	

## COMMITTEE ON NATIONAL LEGISLATION.

Everett J. McKnight.
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## MINUTES OF THE HOUSE OF DELEGATES.

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The first meeting of the House of Delegates was called to order on Wednesday, May 21st, at eleven o'clock, at the Hunt Memorial Building, 38 Prospect Street, Hartford, by the President, Dr. Edward T. Bradstreet of Meriden. There were present Dr. Oliver C. Smith, Dr. William H. Carmalt, Dr. Patrick J. Cassidy, Dr. Samuel M. Garlick, Dr. Geo. M. Burroughs, Dr. Elias Pratt, Dr. Geo. N. Lawson (councilors), and Dr. Paul P. Swett, Dr. Erastus P. Swasey, Dr. Chas. D. Alton, Dr. Frank L. Waite, Dr. Frederick B. Willard, Dr. Ralph A. McDonnell, Dr. Frank H. Wheeler, Dr. Gustavus Eliot, Dr. Oliver T. Osborne, Dr. Chas S. Rodman, Dr. George Thompson, Dr. Chas. B. Graves, Dr. Geo. W. Osborn, Dr. Eli B. Ives, Dr. David B. Wason, Dr. John B. Kent, Dr. George Barnes, Dr. Ralph S. Goodwin, Dr. William L. Higgins (delegates), the President, Dr. Edw. T. Bradstreet, and Dr. Marvin McR. Scarbrough, Secretary *pro tem*. The following reports were then read and accepted.

(1) Report of the President, Dr. Edward T. Bradstreet (Meriden):

### REPORT OF THE PRESIDENT.

*Gentlemen of the House of Delegates:*

It is the custom to open the first session of the House of Delegates of the Connecticut State Medical Society with the Report of the President. Our Society is so well organized, the Board of Councilors so capable and watchful, the various committees so efficient and faithful, that the review of the year and the plans for the future can be better given by these reports than in any other way.

I am pleased to say that the past year has been one of progress. In my visits to the County meetings, I have noted earnestness of purpose along scientific and humanitarian lines,

and many evidences of the stability of the State Society and proofs of its wise plan of organization.

You elected Dr. Tileston as Secretary, to succeed Dr. Steiner, who had served us so loyally and efficiently, and whom we had to allow to leave his office as our Secretary for a higher field. Dr. Tileston entered upon his duties with earnestness and enthusiasm, but was seized with an illness so severe, and of such a nature, that it necessitated a long convalescence and the avoidance, for some time, of any duty outside of his strictly professional life. Our regret in losing his services is more than compensated for by the satisfaction that we feel in knowing that his life was preserved.

Dr. Scarbrough kindly consented, at the request of the Board of Councilors, to act as Secretary *pro tempore*, and has already given evidence of an ability to fill the position. That our plans have been so well carried out, is due, in a very large measure, to the valuable and apparently untiring efforts of Dr. Steiner.

I now have the honor to suggest that we proceed to the regular order of business of this, the One Hundred and Twenty-first Annual Meeting. I will now call for the Report of the Secretary.

(2) Report of the Secretary, Dr. Marvin McR. Scarbrough (New Haven):

### REPORT OF THE SECRETARY.

*Mr. President and Gentlemen of the House of Delegates:*

It was very unfortunate that Dr. Wilder Tileston was obliged to give up the work as secretary of our Society. Early last fall, following a severe mental and physical strain while attending the fatal illness of a sister, Dr. Tileston returned to New Haven in an exhausted condition. With his usual enthusiasm he took up his duties at the Medical School but was soon obliged to give them up. He was stricken with a severe attack of pneumonia, the effects of which have kept him from his duties until the present time. His absence at this meeting is due to the advice of his physicians, who recommend that he be relieved of all duties until the fall. However, next year I am sure



you will have with you Dr. Tileston as an active and enthusiastic member.

The fifth semi-annual meeting of the Connecticut State Medical Society was held at the Town Hall, Willimantic, on October 17, 1912, under the auspices of the Windham County Medical Association. Fifty-six members of the State Society were present. Next October there is planned the sixth semi-annual meeting under the auspices of the Tolland County Medical Association.

The membership of the Society is now eight hundred and ninety-eight members. This includes fourteen honorary members, four having died during the past year. This is a net increase of twenty-four members. During the year there has been added by the County Associations thirty-four new members. New Haven County leads with the largest number, thirteen; Hartford County comes next with nine; Fairfield County with four; Litchfield County with three; New London County with two; and Windham, Middlesex and Tolland counties, each with one. The following is a list of the new members in the County Associations:

George Goldman, Yale, 1910, New Haven.  
 Walter Irving Russell, Yale, 1909, New Haven.  
 James Matthew Kiernan, Yale, 1908, West Haven.  
 James B. Dinnan, Yale, 1904, Meriden.  
 Alexander Louis Prince, Yale, 1910, New Haven.  
 John T. O'Brien, Yale, 1908, Meriden.  
 William C. McGuire, Yale, 1909, New Haven.  
 Ralph DeBallard Clarke, A.B., Univ. of New York, 1904; Johns Hopkins, 1908, West Haven.  
 David Parker Smith, A.B., Yale, 1910; Yale, 1912, Meriden.  
 William John Henry Fischer, Yale, 1911, Milford.  
 Wilda Edwin Butler, Hahnemann Med. Coll., Phila., 1897, New Haven.  
 Walter I. Baker, Hahnemann Med. Coll., Phila., 1898, Naugatuck.  
 William P. Lang, Hahnemann Med. Coll., Phila., 1901, New Haven.  
 Benjamin Brooks Finklestone, P. & S., Balt., 1910, Bridgeport.  
 Bronislaw Louis Smykowski, Balt. Med., 1911, Bridgeport.  
 William Lee Weadon, Coll. of Med., Va., 1905, Bridgeport.  
 Henry Bertram Lambert, Jefferson, 1909, Bridgeport.  
 Edgar Fauver, A.B., Oberlin; P. & S., Columbia, 1909, Middletown.

- Howard Wheaton Brayton, Ph.B., Brown Univ., 1906; Harvard, 1910, Hartford.
- Henry Gildersleeve Jarvis, A.B., Yale, 1906; Johns Hopkins, 1910, Hartford.
- Philip Thomas Kennedy, B.A., Trinity, 1905; Harvard, 1909, Hartford.
- Stuart E. Phelps, McGill Coll., 1899, Farmington.
- Richard W. Rice, P. & S., Balt., 1909, South Manchester.
- Robert M. Yergason, P. & S., New York, 1909, Hartford.
- Leon Irving Madden, A.B., Clark Univ., Worcester, Mass.; Harvard, 1910, Hartford.
- Amos Thomson Harrington, A.B., Yale, '94; S.T.B., Yale, '97; Harvard, 1910, Hartford.
- Julius Lee Birdsong, B.S., Nashville, 1899; Johns Hopkins, 1907, Hartford.
- Edward Joseph Howland, Univ. Vermont, 1911, Colchester.
- Frank E. Wilson, Univ. Vermont, 1911, Montville.
- Chas. Albert Jenkins, Balt. Med., 1911, Willimantic.
- Herbert Chas. Oelschlegel, Jeff. Med., 1911, Torrington.
- Richard J. Lawton, Maryland Med., 1908, Terryville.
- Howard S. Allen, Yale, 1904, Woodbury.
- Edw. Alfred Brace, Univ. Vermont, 1911, Ellington.

Comparing the membership of the different County Associations in 1912 with the present year, New Haven County shows a net increase of sixteen; Hartford County, eight; New London County, three; Middlesex County, two; Fairfield County, one. Windham and Litchfield counties have a loss of one each. The Society has lost during the year fifty-six members; ten have died, including four honorary members (Sir Joseph Lister, London, England; Dr. Maurice H. Richardson, Boston, Mass.; Dr. James W. McLane, New York City, and Dr. John Shaw Billings, New York City); fourteen have removed; two have resigned; twenty-seven have been suspended; and two are dropped for non-payment of dues. The usual table showing the distribution of members follows:

Membership	County Associations	New Members	Reinstatements	By Transfer	Deceased	Removed	Resigned	Suspended	Expelled	Gain	Loss
219	Hartford County .....	10	1	0	2	3	1	0	0	8	0
262	New Haven County ...	13	10	0	0	2	1	18	0	16	0
60	New London County ..	2	1	1	2	0	0	0	0	3	0
180	Fairfield County .....	4	0	1	1	2	0	9	0	1	0
36	Windham County .....	1	0	1	0	2	0	0	1	0	1
60	Litchfield County .....	3	0	0	1	3	0	0	1	0	1
47	Middlesex County .....	1	0	2	0	2	0	0	0	2	0
20	Tolland County .....	1	0	0	1	0	0	0	0	0	0
884		35	12	5	7	14	2	27	2	30	2

Respectfully submitted,

MARVIN MCR. SCARBROUGH,

*Secretary pro tem.*

(3) Report of the Chairman of the Council, Dr. Oliver C. Smith (Hartford):

#### REPORT OF CHAIRMAN OF THE COUNCIL.

*Mr. President and Gentlemen of the House of Delegates:*

The Board of Councilors held their first meeting directly after the adjournment of the general sessions at New Haven, May 23, 1912. Organization was effected, the present incumbent being elected Chairman, Dr. Wilder Tileston, Secretary, and Dr. George N. Lawson, Secretary *pro tem*. On motion of Dr. William H. Carmalt of New Haven that the Chairman should appoint a committee of three, of which committee the Chairman is to be a member, to see that the names of desirable candidates for the State Board of Health be presented to the Governor, the Chairman appointed Dr. W. H. Carmalt of New Haven and Dr. Thomas H. Rockwell of Rockville members of this committee. Following discussion by Dr. Frank K. Hallock of Cromwell on the advisability of the Connecticut State Medical Society acting in coöperation with the Connecticut State Bar

Association concerning legislation, it was moved by Dr. W. H. Carmalt of New Haven to request Dr. Hallock to confer with the Bar Association concerning legislation and medical testimony in court. The meeting adjourned.

The second meeting of the Board of Councilors occurred at the Hartford Club in Hartford, February 5, 1913. In addition to a full attendance by the Councilors, the Board had as its guests Dr. E. T. Bradstreet, President of the Connecticut State Medical Society, Dr. Everett J. McKnight, Chairman of the Committee on Public Policy and Legislation, Dr. Walter R. Steiner and several members of the Committee on Public Policy and Legislation. Various matters of interest to the State Medical Society were discussed, including a criticism of the present method of examining and licensing midwives. C. E. Hoadley, Health Officer of New Haven County, addressed the meeting on this subject. Dr. Everett J. McKnight then outlined the bills pending before the present legislature in which the Society is interested. The import of these various bills and the plans of the Committee were liberally discussed. Dr. M. M. Scarbrough of New Haven was elected Assistant Secretary, this action being requested by the Secretary, Dr. Wilder Tileston, who had been seriously ill of pneumonia during the winter. Tentative nominations for officers and committees for the ensuing year were made. The meeting adjourned.

The third meeting occurred April 25, at the Hartford Club, the Councilors having as their guests Dr. E. T. Bradstreet, President of the State Medical Society; Dr. Frank K. Hallock of Cromwell, Dr. Everett J. McKnight and Dr. Walter R. Steiner. Dr. William H. Carmalt of New Haven discussed a plan for expending the interest of the Gurdon W. Russell Fund for the benefit of the Society. Upon motion of Dr. P. J. Cassidy, Dr. William H. Carmalt of New Haven, Dr. Samuel M. Garlick of Bridgeport, Dr. Frank K. Hallock of Cromwell, and Dr. E. K. Root of Hartford were appointed a committee to consider this matter and to report at the first meeting of the House of Delegates. It was voted to defray the railroad expenses and allow a similar amount to that of last year for

hotel bills and to delegates from the Connecticut State Medical Society to the American Medical Association. Matters pending before the Legislature were freely discussed and the tentative nominations made at the meeting of April 5 were ratified. The Board of Councilors, as the nominating committee, begs leave to submit the following nominations:

*President.*

Dr. D. CHESTER BROWN, Fairfield County.

*Vice-President.*

Dr. W. S. HULBERT, Litchfield County.

Dr. KATE C. MEAD, Middlesex County.

*Secretary.*

Dr. M. M. SCARBROUGH, New Haven.

*Treasurer.*

Dr. JOSEPH H. TOWNSEND, New Haven.

*Committee on Scientific Work.*

Walter R. Steiner.

George Blumer.

The Secretary.

*Committee on Medical Examinations and Medical Education.*

Dr. J. F. Calef, Middletown.

*Committee on Public Policy and Legislation.*

Everett J. McKnight.

William B. Cogswell.

Charles J. Foote.

Elias Pratt.

Rush W. Kimball.

Seldom B. Overlock.

Charles E. Stanley.

Eli P. Flint.

The President.

The Secretary.

*Committee on Honorary Members and Degrees.*

Frank K. Hallock.

Seldom B. Overlock.

Edw. T. Bradstreet.

*Delegate to the American Medical Association.*

D. Chester Brown.

The list of delegates to State Associations submitted by the Committee, consisting of the Chairman of the Board of Councilors and the Secretary, is as follows :

*Maine*—Dr. F. T. Simpson, Dr. J. M. Keniston.

*New Hampshire*—Dr. Chas. C. Gildesleeve, Dr. W. B. Cogswell.

*Vermont*—Dr. Harmon G. Howe, Dr. C. J. Bartlett.

*Massachusetts*—Dr. W. H. Donaldson, Dr. Everett J. McKnight.

*Rhode Island*—Dr. Robert C. Paine, Dr. A. N. Phillips.

*New York*—Dr. George Blumer, Dr. Rush W. Kimball.

*New Jersey*—Dr. Patrick Cassidy, Dr. Harold S. Arnold.

*Pennsylvania*—Dr. W. H. Carmalt, Dr. Burton I. Tolles.

The resignation of Dr. Wilder Tileston as Secretary was accepted by the Council with deep regret. Dr. Tileston felt that his health has not improved sufficiently to permit him to take up the duties of the office.

It is with deep regret that the Councilor has to announce the discontinuance of the *Yale Medical Journal* and with it the monthly publication of the papers and transactions of our State and County Society. While our treasury will profit by this new order of things, it is a serious loss to the profession of the State. *The Yale Medical Journal* was well edited and exceedingly well printed, and furnished a medium for recording the accomplishment and progress of the profession in our State. It is to be hoped that some other publication may be founded. The "Connecticut Quarterly Review" has been suggested. Such a publication would undoubtedly have the support of a vast majority of members of our Society. With the large and growing numbers of flourishing hospitals and the excellent work that is being done in various branches of the profession it is highly desirable that the State should have such a publication as proposed.

The meetings of the Board of Councilors have been more largely attended than previously. The members have manifested

a keen interest in the professional welfare of their respective counties and of the State, for all of which the Chairman wishes to express his deep appreciation.

Respectfully submitted,

OLIVER C. SMITH.

(4) Reports of the Councilors from the different counties in the State.

### REPORT OF THE COUNCILORS.

(a) Hartford County, by Dr. Oliver C. Smith:

*Mr. President and Gentlemen of the House of Delegates:*

Numerically the Hartford County Medical Society is about at a standstill, our membership now being two hundred and nineteen. Five members have been admitted, and one reinstated during the year. Two have removed to the West for the benefit of their health and two have died.

Dr. Nathan Mayer of Hartford died July 10, 1912. Dr. Mayer's obituary was read at the fall meeting of the Hartford County Society and will be published with the proceedings. He entered into the practice of medicine in Hartford in 1861. The following year he enlisted in the Eleventh Regiment, Connecticut Volunteers, and served throughout the war with distinction. At the close of the war he resumed his practice in Hartford, where he became a marked factor among the profession and the community. His early work in tracheotomy brought him the widest reputation. He was a facile writer and his pen was always at the disposal of his local as well as the State Society.

Dr. Charles James Fox died at Hartford, April 17, 1913, after a brief illness. Dr. Fox was interne at the Hartford Hospital in 1876 and 1877, after which he practiced medicine at Willimantic, Conn. For the past six years he has practiced in Hartford, largely limiting his work to diseases of the skin. From 1886 to 1888 he was Surgeon General of the National Guard of



Connecticut. He had been a member of this Society since his entrance into practice. He was a genial and kindly man and a good practitioner.

Both the spring and fall meetings of the Hartford County Medical Society have been well attended; the papers and discussions have been of unusual interest. At the spring meeting a dinner was served at the Hartford Club, following the literary and business exercises, which was attended by seventy-five members and proved a most enjoyable occasion. The meeting was addressed by Dr. E. T. Bradstreet, President of the Connecticut State Medical Society. Dr. John F. Dowling, the President-elect, acted as toastmaster.

The Chairman is glad to report the completion and occupancy of the fire-proof library building which has been added to the Hunt Memorial during the past year. The funds for its erection were provided entirely by members of the Hartford Medical Society. It is anticipated that this addition to our Medical Home will prove a great benefit, not only to members of our County Association but to members of the State Society. The building will be open for your inspection during the present meeting.

In addition to our large and well-equipped hospitals at Hartford, the city is erecting a fine modern hospital for contagious diseases to be under the management of the Hartford Board of Health.

It may be fairly stated that at no time has the medical profession of Hartford County accomplished better work, been more harmonious, and more progressive than at the present. There is still room, however, for more complete organization, for more generous coöperation and for an increase in scientific zeal.

Respectfully submitted,

OLIVER C. SMITH.

(b) New Haven County, by Dr. William H. Carmalt:

The New Haven County Medical Association reports a membership of two hundred and sixty-two, as against two hundred



and forty-six last year—a gain of sixteen. This includes three graduates of homeopathic medical colleges, who have accepted the American Medical Association requirements for membership: signing an agreement “to practise in accordance with the established usages of the profession, and in no way profess adherence or give any support to any exclusive dogma or school.” This action was brought about primarily by the action of the New Haven Medical Association some time ago, in inviting all legally qualified practitioners to attend its meetings and to take part in the professional discussions, etc. A number availed themselves of the invitation, and some subsequently asked to join the County Association, with the result stated. Since they have joined, others have signified their intention to do likewise—under, of course, the same conditions. The New Haven County Medical Association regards this as a step in the direction of ultimately having one State Examining Board—“a consummation devoutly to be wished.” The following is a sample of the application for membership in the New Haven County Medical Society:

APPLICATION FOR MEMBERSHIP  
NEW HAVEN COUNTY MEDICAL ASSOCIATION  
OF THE  
CONNECTICUT MEDICAL SOCIETY

Dated .....19 .

The undersigned hereby applies for admission to membership in the New Haven County Medical Association and the Connecticut Medical Society. He subscribes to their plan of organization and agrees, if elected, to be bound by their Constitution and By-Laws.

*Signed* .....  
Name in full.

*P. O. Address* .....

*Date of Birth* .....

*College and Date of Graduation* .....

*Any other degrees than M.D.?* .....

*If so, where and when obtained?* .....

*Date and Place of Registration* .....

*By which Medical Board Examined* .....

Recommended by

..... } Committee on  
 ..... } Credentials.  
 .....

#### REQUIREMENTS FOR MEMBERSHIP.

1. Any reputable and legally registered physician, who does not practice, or claim to practice, or lend his support to any irregular system of medicine, shall be eligible to membership.

2. Any practicing physician of good moral character, who has resided and practiced medicine in the State of Connecticut one year and in New Haven County six months, preceding any regular meeting, who has made application in writing to the Clerk at least 30 days before said regular meeting, who has been recommended by a majority of the Credential Committee, and who has been elected by two-thirds of the votes of those members voting at said regular meeting, shall become a member of this Association.

3. Any member of another county association in this State, or of any county association of any State or Territory of the United States, which is affiliated with the American Medical Association, who removes to New Haven County to practice medicine, and who presents a certificate signed by the President and Secretary of the county association of the county from which he has removed, within four months from the date of its issue, stating that he is a member in good standing in that association, may, upon the recommendation of the Committee on Credentials, be elected a member of this Association by a two-thirds vote of the members voting.

4. He shall fill the above blank, and his signature to the same shall be considered a subscription to the Constitution and By-Laws of the Connecticut Medical Society and the By-Laws of the New Haven County Medical Association.

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When the application is completed it is to be forwarded to the Clerk.

I am happy to state that there have been no deaths in our membership. Two members have resigned, to go to the far West; two have removed to other parts of the State, still

retaining their membership; and one has been placed on the exempt list.

In this connection, it is well to mention a matter for the consideration of the Committee on Public Policy and Legislation, viz.: as to having all physicians, regular and otherwise, compelled by law to register with the Town Clerks of their respective towns; so that the Clerks of the various County Medical Associations may have knowledge of the movement of physicians throughout their respective counties. As at present carried out, any one Clerk knows of the entrance of a physician into his bailiwick only by notice from the Clerk of another county, given by reason of the one moving asking for a certificate of good standing. Indeed, even this is not given until asked for by the Clerk of the county into which the practitioner has moved; so that if the new man is not already a member of a County Society, the Clerk has no means of knowing of his presence, except when he sees an unfamiliar name on a sign or learns of it in some other equally accidental way. It is, however, the duty of both Clerk and Councilor to keep account of the physicians in the county, and to get all such as are of good repute to affiliate themselves with the County Association. The only official list of this kind is contained in the Connecticut Register, a year behindhand. The list of those registered with the State Board of Health is even more cumbersome. The list given in the last report, *just out*, is "continued from last report," which legend is presumably carried back *ad infinitum*.

The meetings, semi-annual and annual, of the County Association were both well attended—the latter particularly so. Perhaps the presence of Sir William Osler, Regius Professor of Medicine in Oxford University, England, may have added interest to the occasion; but, owing to the industry and professional energy of our County Clerk, Dr. Hartshorn, a clinical feature of interest was introduced on the programme, which attracted several from neighboring counties. Distantly, in this connection, the relation of hospitals to the profession at large is not what it should be. Every hospital should be an educational institution, not only to the men who practise therein, but

also to those members of the profession who do not have the hospital privilege—for privilege it certainly is. More or less formal lectures or conferences on especial cases in the wards, to which physicians in the neighborhood could be invited, would be of distinct educational value to those not having opportunities for hospital facilities in the way of laboratories and the like; and the increase in the number of public hospitals and of public and private sanatoria is an indication of the desire for more careful study and more accurate treatment.

In my report of a year ago, to which, in order to avoid repetition, I beg to refer you, mention was made of an Isolation Hospital for the City of New Haven and a contemplated Tuberculosis Annex to the New Haven Hospital—both of them more or less in the dim future. I am happy to state that both are now much nearer their consummation.

After some twenty years of opposition, the City of New Haven is, *mirabile dictu*, actually building a contagious-disease hospital, with an up-to-date equipment, on the New Haven Hospital grounds; the city finally accepting the offer made about fifteen years ago by the Hospital Society, of a location on the hospital grounds, but against which an injunction was then filed.

The anonymous donor of funds for the Tuberculosis Annex to the New Haven Hospital has completed the gift to the amount suggested at the beginning, and the Directors are now at work on the plans for the buildings necessary to care for one hundred patients in advanced stages. When this is completed, New Haven County would seem to be fairly well equipped in the fight for the control of tuberculosis. She will then have the Gaylord Farm Sanatorium, near Wallingford, a private corporation, with eighty-five beds; the Undercliff Sanatorium, the State institution near Meriden, with a capacity of one hundred and twenty beds,—both caring for the incipient and moderately advanced cases with the prospects of cure; and this one, for the advanced, generally speaking hopeless cases, removing them from their homes, where they are the greatest danger of communicating the disease to their families and the

community, to a place where they can be cared for and made innocuous.

Respectfully submitted,

WILLIAM H. CARMALT.

(c) New London County, by Dr. Patrick J. Cassidy.

*Mr. President and Gentlemen of the House of Delegates:*

In New London County during the past year everything has been serene and harmonious. Hygienically speaking, the most pronounced step in advance taken in the history of New London County was the opening of the State Tuberculosis Sanatorium, located near Norwich. This sanatorium was opened for inspection by the members of the New London County Medical Association on February 14, and during the following week was receiving patients. It is beautifully situated and easy of access from all parts of eastern Connecticut, and fills a place that was necessary, not only from the hygienic point of view, but from the educational, being able to accommodate at its full capacity ninety-two patients evenly divided as to sexes. It has at present fifty-one patients. The medical fraternity of our County are pleased at the results already shown in this institution.

The meetings of our County Association have been well attended. At the fall meeting held in New London in October, 1912, the papers were interesting, educational and well discussed. At the spring meeting, the annual meeting, held for the first time at the William W. Backus Hospital, the attendance was extraordinarily large, this large attendance being due partly to the fact of the opportunity of the non-resident members to inspect the hospital and also because of the expected literary and scientific treat promised by the programme. The papers at this meeting were, first, a paper by Dr. Charles Osgood of New York City upon "Tracheo-Bronchoscopy with Clinical Demonstrations." The next, a paper upon the "Physiology and Clinical Meaning of Intra-Cerebral Pressure" by Dr. C. K. Stillman of Bellevue Hospital, New York City. Lastly, a very interesting

paper on Surgical Diagnosis by Dr. Rush W. Kimball of Norwich.

It is with great regret that I speak of the death of Dr. Francis N. Braman of New London, a sometime President of the Connecticut Medical Association, one of our older practitioners and a man of sterling worth and character, and of the sudden taking away of Charles E. Brayton of Stonington, one of the most earnest workers on our County Medical Society's roll. Both of these men had been honored by the New London County Association by being elected president at various times, and both were, in the old days of the State Society, high in its councils.

We, in New London County, have been during the past two years displaying more "get-together" spirit, that works for the best interests of our association. We hope to continue to have the same spirit.

Respectfully submitted,

PATRICK J. CASSIDY.

(d) Fairfield County, by Dr. Samuel M. Garlick.

*Mr. President and Gentlemen of the House of Delegates:*

Fairfield County again comes to you, through its Councilor, with a report of continuous progress, a commendable degree of energy, and an encouraging state of medical activity. It is a pleasant duty to record that since my last report nothing has occurred to mar our pleasant social and professional relations. Professional rectitude seems to be the purpose, if not always the attainment, of all members of Fairfield County Association.

Last year we reported an active membership of one hundred and seventy-nine. It has been our pleasure to receive during the year five new members. Of this number, three are young men of relatively recent graduation; we welcome one from a distant State—Dr. W. Lee Weadon, from Virginia,—and one as transferred from Hartford County—Dr. George A. Smith. It may be observed that none of the practitioners of longer residence in the County have been induced to join us.



One member, long beloved and of an honorable service, has been removed by death, Myron W. Robinson, for several years Resident Physician at the Soldiers' Home in Noroton. His obituary will be presented at an appropriate time. Ten members have been "dropped" for non-payment of dues; one member and three non-members have removed from the County. This total loss of twelve members, with an accession of only five, leaves us with an active membership of one hundred and seventy-two; a somewhat less total than at our last report. We reassure ourselves by noting the interesting fact that during the year we attained the largest membership which we have had since the reorganization years ago.

There are in the County two hundred and ninety-nine practitioners; it is not right, it is not for the greatest good of the public, nor is it to the best interests of the profession, when but little more than one-half, only 55 per cent., of the medical men in any community are personally or directly interested in organized medicine. I repeat from last year's report:—"there are yet too many non-affiliated practitioners."

Our five local societies are all alive, active and doing good work,—good work for the individual members, good work for the profession, and good work for their respective communities. The writer believes that only as "organized medicine" can we accomplish the greatest good for civic betterment and public health. I desire to emphasize this idea as a reassurance to discouraged and oftentimes overworked Society officials and as a needed stimulant to the altogether too many non-appreciative and often indifferent members.

Our efficient County Secretary has made a somewhat careful study of our statistics with the following interesting results: Of the one hundred and thirty-three practitioners and men of medical education not affiliated with us, fifteen belong to the homeopathic persuasion; thirteen are "eclectic" in their profession, whatever that may mean; three are of other association or non-descript. Of the remainder, all of whom also might be with us, sixteen are not in active practice or are employed in some allied or other calling; eleven have been "dropped" for

non-payment of dues; nine have not been resident the requisite time for admission; twenty are not sufficiently interested to become affiliated; and from forty-six no sufficient reason has yet been obtained for their non-affiliation.

Right here, in view of this work, let me divert enough to remark upon the importance of having a competent and efficient Secretary, and scarcely any less important is an efficient Treasurer. Upon these two officers depends, almost altogether, the continuity of the Association, the quality of the work done, the attendance at the meetings and the permanent interest of the members. Without cordial reception our members will not attend; without solicitation they will not prepare and present papers, and if annual dues are not promptly collected, members in arrears, but otherwise valuable, must be dropped. The best and most enthusiastic of us do not pay "back scores" cheerfully. In order to make some compensation for the really burdensome work of an efficient officer, our Association has just now voted to give the Secretary one-half of the rebate from the annual dues paid to the State Society; the other one-half goes to the Treasurer for his work. It has been suggested that inasmuch as the work of the two is much in duplicate, perhaps it were better to have one person as Secretary-Treasurer.

We have no less than eight general hospitals, twelve private sanatoria, several homes for the aged and for children both endowed and sectarian; two sanatoria for the tubercular, and others in view. Surely the sick, the needy and the deficient are greatly if not sufficiently provided for.

The hospitals in Fairfield County, public endowed, sectarian and private, are all and each industriously at work enlarging their borders, increasing their efficiency, accumulating gifts, and all are making by no means minor efforts to secure favors or financial aid from the public funds. It is a matter of just and righteous civic pride that the State of Connecticut has always dealt generously with the poor, the needy and the distressed within its borders. We trust it may ever be so. In the opinion of the writer, however, no public money should be granted to sectarian, or to purely private institutions, charitable or otherwise.



Of course the more intense medical activity is observed in the larger and more congested centres. It by no means follows, however, that useful activity is confined to such centres. The rural practitioner and the man influential in the country village is often doing, almost alone, more altruistic work for the general welfare than his confrères in the city. For all around intelligence, an active interest in the health of his community and an acute sense of what makes for the best welfare of his individual patient, let me commend to you the faithful doctor of our country towns.

Fairfield County has five cities. The local Society in Bridgeport is alert, watchful of all affairs pertaining to the health of child or adult. At the request of the Superintendent of Schools, the members volunteered to lecture before the parents and teachers one evening each week in different schools and upon different topics relating to child welfare. A considerable number of these lectures were given. The whole scheme was experimental; while some lectures were a flattering success, the larger number were not satisfactory. Too much was attempted. With the experiences of the past season we are confident that a modified course will be well worth an effort next year. Bridgeport continues to have the antivaccinationist. Honest in himself, he is terribly misinformed, and like so many other persons who know so much "that ain't so" he is vociferous in expressing it.

Largely due to the persistent and enlightened efforts of Dr. Geo. L. Porter, on the Board of Trustees, the Bridgeport Hospital has entered upon new and energetic plans. We have now a well-equipped laboratory, with a salaried pathologist, and we look forward to satisfactory research work. In the last four months more than two hundred patients have been declined admission. An effort is being made to secure more than a quarter of a million dollars, to be used in needed enlargement and reconstruction. Encouraging progress is being made; one gift of fifty thousand dollars and many more of lesser but yet very substantial sums are assured, so that nearly two hundred thousand dollars are in sight. New ground will be broken at an early date.

St. Vincent's Hospital is attractive and well equipped, an institution of which we are proud. It maintains an efficient clinic and dispensary, and has just recently completed a fine children's ward, thus greatly enlarging its beneficent service to the community.

It appears that for some time the physicians of Stamford have felt that the efficiency of the Health Board of that city has been hampered by a lack of direct responsibility. Also the good effects of adequate milk inspection has been prevented by non-publicity of the Inspector's reports. Through the efforts of the local Association these defects are apparently in a way to be corrected; the one through an appeal to Hartford and the other by efforts with the local administrative bodies.

At a cost of nearly four hundred thousand dollars, Stamford will soon open for reception of patients a new hospital; perhaps second to none in New England; model and modern in all respects. Beautifully and conveniently located on high ground; plain yet refined in architectural effect; ample in proportions, it will, without further additions, probably furnish all local hospital requirements for years to come. Especially interesting is the isolation or contagious disease ward. Remote from the main structure yet easy of access, it provides accommodation for about fifty patients with physician and attendants. It seems nearly perfect; indeed Stamford physicians say *it is* the most perfectly constructed and the most completely equipped structure of its kind. The erection of such a ward was made possible by a single gift of fifty thousand dollars for that express purpose.

Greenwich, reflecting somewhat the glory of its neighbor,—New York City,—and profiting not a little by its overflow of wealth, is nevertheless looking for better conditions of public health, and improved conditions in its schools. Full to its capacity, Greenwich Hospital is in a receptive mood; wants more money, larger facilities and a more liberal service.

Norwalk harbors, as does also its next neighbor, Stamford, an excess of nondescripts calling themselves Chiropractics. It feels keenly, as does all western Fairfield County, the pressure

of the annual summer medical exodus from New York City. It is alleged that these somewhat frequent visitors do not always observe either the letter or the spirit of the Medical Practice Act nor do they always conform to principles of medical ethics either in personal relations or in professional fees. Our State is liberal in its law as applied to non-resident medical men; it is only simple justice that they should be required to observe and comply with the same.

Danbury, our bright Star of the North, beautiful in location, isolated in its grandeur, is still doing business in the same official way and at the same old stand. The service at the Danbury Hospital has already outgrown its capacity and there is an active demand for enlarged space and increased facilities. There seems to be as elsewhere a special call for private rooms or small wards where patients of moderate means may be cared for and retain the service of their own or a family physician. Plans for such increased accommodations have not yet taken practical shape.

Our annual and semi-annual meetings have been well attended and scientific work of high grade and instructive character has been done. Many excellent papers, showing much thought and careful preparation, have been presented by our members, and a lesser number of papers, but no less instructive in character, have been read by friends from without the State,—a courtesy which we greatly appreciate. Besides some other visiting delegates, at our annual meeting in Bridgeport, we had the pleasure of having with us the President of the State Society. I would again call attention to the fact that Fairfield County is very desirous of cultivating fraternal relations and cordially welcomes and cheerfully entertains visiting delegates.

Irregular, or more correctly speaking, nondescript practitioners, incompetent midwives, surreptitiously practicing medicine, and "Contract Practice" is still with us. We somewhat impatiently wait for the elimination of the former and the eradication of the latter. Fairfield County is a unit in urging upon the Legislative Committee the most careful and continued watchfulness over all proposed action at Hartford directly or

indirectly opening the door to incompetent and so-called "Doctors."

These subjects with others, including consideration of the proposed act to restrict the sale of narcotic and poisonous drugs, the advisability or non-advisability of requiring a certificate of health as a preliminary to marriage; an enquiry whether the State Medical Examining Boards were or were not attentive to their duty in faithfully refusing certificates to those not found duly qualified; all these subjects, I repeat, have been the subject of frequent and earnest discussion in our local associations. I would earnestly commend to this House of Delegates a like careful consideration of these matters.

Signed,

SAMUEL M. GARLICK.

(e) Windham County, by Dr. George M. Burroughs:

*Mr. President and Gentlemen of the House of Delegates:*

The fifth semi-annual meeting of the Connecticut State Medical Society was held with the Windham County Medical Association, at Willimantic, in October. Interesting papers were presented, and were appreciated by all of the members present. The number in attendance was much less than was expected, there being only about forty members present. There was about an average number in attendance at the annual meeting in April. The local society at Willimantic is in a flourishing condition, and has done much to promote harmony and good feeling among the members. Fees have been regulated, and unwholesome rivalry has been eliminated.

Harmony and prosperity continue to prevail among the members of the County Association, and nothing has transpired during the past year calling for action by the Councilor. The number of members remains the same as a year ago. One member has removed to another county, and one new member was elected at our annual meeting.

Each of the two hospitals in our county is doing an increased amount of good work.

Respectfully submitted,

GEORGE M. BURROUGHS.

(f) Litchfield County, by Dr. Elias Pratt:

*Mr. President and Gentlemen of the House of Delegates:*

No marked change has taken place in the Litchfield County Society since the last report. There is continued good fellowship and harmony among its members. There have been two meetings held during the year, as usual, both of which were well attended, and at which interesting and instructive papers were presented.

At the spring meeting the question was taken up of holding a special meeting the coming year to celebrate the one hundred and fiftieth anniversary of the founding of this Society. A committee was appointed to take this matter under consideration and report at a future meeting. The Society has met with a great loss in the death of Dr. George H. Knight of Lakeville. Dr. Knight was well known throughout the state, both from his professional work in the institution of which he was the head, and also in his public life as a legislator and a member of the commission for the establishment of hospitals for the care of tuberculosis.

The Litchfield County Hospital at Winsted continues to do excellent work.

Respectfully submitted,

ELIAS PRATT.

(g) Middlesex County, by Dr. George N. Lawson:

*Mr. President and Gentlemen of the House of Delegates:*

Our two county meetings have been well attended and the papers read have been of excellent character. At these meetings we have enjoyed the visits of the President of our State Society and of Dr. Smith of Bridgeport, Dr. Smith of Meriden and Dr. Brewer of New London. A very unusual item of business at our spring meeting, and one that I do not remember having occurred before in the twenty years I have known the County Society, was a hearing on accusations of unprofessional conduct made against a member of the Society. After hearing these charges and a reply to them by the member accused, it was voted that as the man in question had made restitution to

those whom he was accused of having wronged and had apologized to the Society for his error, the charges be dropped and the member retained in the Society. The Middletown Central Medical Society has held very interesting monthly meetings.

I want to call attention to the good work that is being done in the various institutions in the county. At the Connecticut Hospital for the Insane the men are doing splendid scientific work. The Middlesex Hospital is steadily growing and those connected with it are also broadening out and accomplishing greater things. A fine new building, the Joseph J. Hendley Memorial Home for Nurses, is just now (May 22) being opened. The Social Service League of Middletown is continuing its beneficent work of providing district nursing among the poor, and is reopening for the summer its milk station, where proper food is prepared for the babies. The physicians of Middletown are still giving their services in rotation in the inspection of the schools. The Middlesex Antituberculosis Society has done excellent service both by keeping open a summer camp for incipient cases of tuberculosis and also by its educational work. It is a question whether the society should keep open its summer camp this season or turn the cases over to some one of the institutions aided by the State. We have been living in hopes of having a State sanatorium for consumption in our county, but it looks as if we should be obliged for some time to come to send our consumptives out of the county for treatment.

Respectfully submitted,

GEO. N. LAWSON.

DR. GEO. N. LAWSON (Middle Haddam): The Councilor from New Haven County spoke of the need of giving the practitioners not connected with hospitals a chance to share in their advantages. He should see the good work that is being done at the Middlesex Hospital. Its staff are inviting the practitioners from various parts of the county to be present at a clinical day once a week. This is very helpful to those outside the hospital.



THE PRESIDENT: The last Councilor's report is the Report of the Councilor from Tolland County, Dr. Thomas F. Rockwell of Rockville.

DR. W. L. HIGGINS (South Coventry): I have the report from Dr. Rockwell that he intended to be present. He telephoned me, since the opening of this meeting, that he had been unavoidably detained, but would be here to-morrow morning, and would then present his report to the Secretary. I move that when this report is received, it be accepted and printed with the other reports of a similar character.

The motion was seconded and carried.

(h) Tolland County, by Dr. Thos. F. Rockwell:

*Mr. President and Gentlemen of the House of Delegates:*

I have the pleasure to report to you that the social and professional relations of the members of the Tolland County Medical Association have been pleasant and cordial during the past year.

Our semi-annual meeting was held at Stafford Springs, Conn., Tuesday, October 15, 1912, and was well attended. Papers read were: "The Treatment of Certain Disorders of the Digestive System in Infancy," by Dr. Charles A. Goodrich of Hartford; "Headache," by Dr. F. L. Smith of Stafford Springs; "The General Practitioner and Eye Work," by Dr. Calvin Weidner of Hartford. The papers were all very helpful and instructive.

The 121st annual meeting was held at Rockville, Conn. We were glad to welcome Dr. E. J. McKnight, delegate from Hartford County; Dr. E. O. Winship, from New London County and Dr. W. P. S. Keating of Windham County.

Dr. E. J. McKnight read a very instructive paper on "Diagnosis of Abdominal Lesions." Other papers were: "Medical Inspection in School," by Dr. E. P. Flint of Rockville, and "Medical Review," by Dr. Cyrus B. Newton of Stafford Springs. The papers were all helpful.

The County Association lost one member by death during the year. Dr. Edwin Taylor Davis died of diabetes at his home

in Ellington, June 26, 1912. He was born at Richford, Vermont; was a graduate of the University of Vermont in 1888, and had been in active practice in the town of Ellington for about twenty years. His obituary was read at the fall meeting by Dr. E. P. Flint. His death was a sad loss to his friends and to the Tolland County Association.

The Society gained one member during the year—Dr. Edward Alfred Brace of Ellington, Conn., a graduate of the University of Vermont in 1911.

The very kind invitation of Dr. McKnight to have the Connecticut State Medical Society and the Tolland County Association hold their joint semi-annual fall meeting at "The Millstone," his summer home in Ellington, was accepted with many thanks.

Doctors T. F. O'Loughlin, F. M. Dickinson, C. B. Newton and E. P. Flint were appointed a committee to act with a committee to be appointed by the State Society, to plan such arrangements as will be necessary for the meeting. The members of the Association are looking forward to that meeting with much interest.

Respectfully submitted,

THOS F. ROCKWELL.

(5) Report of the Treasurer, Dr. Joseph H. Townsend (New Haven), to the Connecticut State Medical Society, for the year ending May 21, 1913.

## REPORT OF THE TREASURER.

### RECEIPTS.

Balance from old account,	.	.	.	.	.	\$ 405.45
Cash from County Clerks:						
Hartford County,	.	.	.	.	.	\$759.60
New Haven County,	.	.	.	.	.	897.40
New London County,	.	.	.	.	.	187.20
Fairfield County,	.	.	.	.	.	644.40
Windham County,	.	.	.	.	.	148.00



Litchfield County,	\$198.00
Middlesex County,	154.80
Tolland County,	43.20
	<hr/>
Total,	\$3,032.60
	<hr/>
	\$3,438.05

## DISBURSEMENTS.

Dr. H. W. Ring, Anniversary chairman,	\$ 76.90
Stenographer, Annual Meeting,	124.24
Yale Medical Journal, balance due for publishing Proceedings of 1911,	1,500.00
Tuttle, Morehouse & Taylor, for publishing Proceedings of 1912,	1,273.06
Distributing Proceedings in Hartford and Bridgeport,	8.53
Printing, stationery, etc.,	50.40
Salary of Secretary,	150.00
Expense of Secretary, postage, etc.,	7.95
Salary of Treasurer,	25.00
Safe Deposit Box and Treasurer's Bond,	10.00
	<hr/>
	\$3,226.08
Cash to balance,	211.97
	<hr/>
	\$3,438.05

## ARREARS IN TAXES LAID 1912 AND 1911.

	1912	1911
Hartford County,	\$120.00	\$20.00
New Haven County,	208.00	72.00
New London County,	24.00	4.00
Fairfield County,	112.00	4.00
Windham County,	none	none
Litchfield County,	32.00	19.00
Middlesex County,	none	none
Tolland County,	12.00	none
	<hr/>	<hr/>
	\$508.00	\$119.00

## DR. GURDON W. RUSSELL FUND.

## INCOME.

Received interest on bonds,	.	.	.	\$305.00
Received interest on deposits,	.	.	.	11.25
				<hr/>
				\$316.25

The Fund is invested as follows:

				Par Value
5 Conn. Railway & Lighting Bonds,	.	.	.	\$5,000.00
2 Consolidated R. R. Bonds,	.	.	.	2,000.00
Deposit, Conn. Savings Bank,	.	.	.	519.47
				<hr/>
				\$7,519.47

Respectfully submitted,

JOSEPH H. TOWNSEND,

*Treasurer.*

This is to certify that we have this day examined the accounts and vouchers of the Treasurer and find the same correct, and the securities listed above to be in his possession.

W. H. CARMALT,

SAMUEL M. GARLICK,

*Auditors.*

HARTFORD, CONN., May 21, 1913.

(6) Report of Committee on Medical Examinations and Medical Education, by Dr. Charles A. Tuttle (New Haven):

# REPORT OF THE COMMITTEE ON MEDICAL EXAMINATION AND MEDICAL EDUCATION.

*Mr. President and Gentlemen of the House of Delegates:*

Your Committee on Medical Examinations and Medical Education presents herewith its Twentieth Annual Report.

The Committee has held six meetings during the year and, according to law, conducted three examinations, each extending throughout two days.

There have been examined 93 candidates for certificates of qualification in General Practice, of whom 74, or 79.5 per cent., have fulfilled requirements and to whom such certificates have been granted, and 19 or 20.5 per cent. have failed to obtain the required rating, viz.: 75 per cent. There have been examined also 16 in Midwifery alone, and of there 8, or 50 per cent. only, have shown sufficient knowledge of the subject to warrant their being accepted.

#### MEDICAL EDUCATION.

As you know, for the last few years standards of medical education and teaching have advanced most rapidly in this country, and it has been the effort and intent of your Committee to keep pace with all phases of the situation and to profit by it for our examinations. While we do not wish to work a hardship upon any promising candidate, our requirements for admission to the examinations and the qualifications necessary for passing must be always increasing. Were it not so, our State must be the dumping ground for unsuccessful candidates from contiguous states.

This advancement has been strikingly manifest to us in the general character and personnel of the applicants and in their greater general and medical knowledge. The percentage of failure this year has been less than for four years, in spite of the fact that our examinations have been even more searching than in former years. It is, however, with keen regret that we are obliged to note a regression in one particular. We find, that in the knowledge of materia medica, and especially in the physical properties, origin and appearance of nearly all of our common drugs, there is an unpardonable deficiency. It is difficult to appreciate why a student in a four or five years' course in medicine is not taught that such a familiar alkaloid as quinine has its origin in Peruvian bark, that it is bitter to the taste, and that it is usually a crystalline powder, as well as that something called "quinine" cures malaria. It would seem that the student was entitled at least to be shown Peruvian bark and the more common of its alkaloids in the course of such instruction.

Why should not a student recognize poppy and know that opium is obtained from it, and that morphine is an alkaloid of opium? Why should he not be able to distinguish gum acacia or rhubarb root in some of its common commercial forms?

To teach only the word "cocaine" and only its therapeutic properties, seems to your Committee inexcusable. Why not just as well call it "Tongaline A" or Peruna B, or any other word. In short, your Committee feels that while *materia medica per se* in the light of modern knowledge and practice, may not be entitled to the time credits in the curriculum of an ideal medical course that it formerly had, yet it is evident that the subject is not receiving the attention to which it is entitled or is being taught in some institutions in a desultory way. The results of the practical tests in the *materia medica* examination which the Committee has carried on at the last two examinations and the personal interviews with the many candidates, is the warrant for these statements. Let me quote the answer of two applicants who were given a sample of three common drugs each, to name and to describe one of them.

No. 679 says: "I have never had a course in pharmacy or detection of crude drugs! No course in this is given in any Class A school of the country. Anything I could do would be a guess and the guess of a mere boy would be as good. I have never seen a crude drug until to-day. My only excuse is ignorance because there is nothing of the kind given in any medical school to-day."

No. 680 writes: "The medical curriculum of the present day does not concern itself with the study of crude drugs and their transformation into the products we do study and use. Such work is for the pharmacist. My guess would be as valuable as that of any layman."

These answers are typical of all the six applicants from that Class A School.

Bear in mind that, unlike New York State, the law requires us to examine in *materia medica*.

## SPECIAL CASES.

The Committee is often importuned by members of the Society and others to grant special dispensations to their friends, and really absurd reasons and arguments are put forward in support of their claims. Such a case has been recently pressed from an unexpected source. As you well know, the disposition of the Committee is to administer the work of the examination on the most fair and equitable basis to all, and it has given much time and its best energies to the work, has formulated certain rules and requirements which seem to be for the best interests of all concerned; but it cannot feel that the best results for the commonwealth and for the physicians of Connecticut is conserved by departing one iota from the rigid standards of procedure laid down. We feel sure that if the plain facts of all these special cases were laid before you, there would be a practically unanimous endorsement of the attitude and decision of the Committee. Certain it is that neither wealth, social position nor friendship for anyone should entitle the applicant to any favoritism. If a license in Connecticut is worth anything, it is worth at least the little exertion necessary to pass the examination.

## INTERSTATE ENDORSEMENTS.

The Committee has not reported in the last few years the status of interstate endorsements of medical licentiates in this country, particularly in the Atlantic sections in which we are most acutely interested. This year especially this subject has been actively discussed, inasmuch as some new phases of the subject have been presented in relation to the special cases above referred to. We still feel that for Connecticut, "Reciprocity," so called, is yet unwise, even if it were possible. Because of the hydra-headed examination system in this State (there now being but four others in the United States in the same position) many of the State Boards view us inquiringly. We find further that New York, New Jersey and Pennsylvania impose conditions, along the line of preliminary education, for which the laws of our State do not provide, and that the contiguous States of

Massachusetts and Rhode Island do not have reciprocal relations with other States.

We think that interstate endorsement is unwise for Connecticut for many reasons,—especially is this true of New York State. As you well know, there are 14,847 physicians in that State, of whom it is a fair estimate to say that about 400 spend some part of the year rustivating in Connecticut. The greater part of these would not be unwilling to pay for their vacation by doing more or less practice. As to their qualifications we would care to offer no comment; presumably they are fully equipped and could meet our requirements if they were willing to prepare to do so. It is our opinion that they should not be allowed to come in for the asking or for the small license fee of fifteen dollars. They come into contact and competition with the resident physicians in the smaller villages, mountain and seashore districts. It would, we feel, work a hardship upon the resident, tax-paying physicians of the community who at best have a difficult task many times to pay their way and to bring up and educate their families. Connecticut has something over 1,500 physicians and to make it possible to increase that number by one new man to every three of those now in the State would appear to be ridiculous. This is New York alone. If now we add to that number those of Pennsylvania and New Jersey and other States, the results might be embarrassing, not to say alarming. Reciprocity with Connecticut might be very good and convenient for New York, New Jersey and Pennsylvania, and for itinerants, but Connecticut, with her small numbers, would be the loser. Not only do the migratory summer visitors patronize these non-resident physicians, but the natives of the section do also.

#### MIDWIFERY EXAMINING BOARDS.

There has been much just criticism and even alarm at the increasing number of midwives licensed in the State. There are now registered and practicing 156, at least one to every 10 physicians. No more striking effect of the incongruity of three or four examining boards is needed. As you know, an applicant

for license in General Practice must appear before the Board representing the same school of practice from which he was graduated. In the case of midwives this is not true and an applicant may choose which one of the three committees before which she may wish to appear. This has made it possible for midwives to be examined under at least the three different standards established by the three examining boards.

Fortunately, however, this condition bids fair to be overcome, and it is hoped that in the future fewer, and only those most competent, will be granted certificates of qualification. The present legislature has under consideration a bill providing for a special Board of Examiners in Midwifery.

This Board will be made up of three members, one from each of the examining committees, viz.: one from the Regular, one from the Eclectic, and one from the Homeopathic Examining Committees. It is the hope of your Committee that this bill will become a law, unless it may seem wise to attempt to suppress midwifery in this country altogether.

It is interesting to note that some of the midwives examined in past years have presented foreign diplomas granted by universities which have full-time professors in midwifery, active members of the medical faculties. These give as high grade instructions as is general in their respective medical departments. On the other hand, some have presented diplomas obtained in our own country which your Committee knows to be almost worthless. If midwives, licensed as such, are to be tolerated in this country, and it seems fair to assume that they have a legitimate place and will, then it is unfortunate that the country has no institution willing to offer such courses as will properly qualify these women for the work which they do, and which their position and practice demands. The few schools which do exist are proprietary and almost entirely mercenary, inefficient, frequently for a small price granting diplomas, *in absentia*, or for a few months' attendance. Many of the European schools require from one to three years' resident attendance.

With this year expires the term of Dr. Calef as a member of the Committee. For nearly twenty years Dr. Calef has given



freely of his time, skill and counsel to the work and problems of the Committee, and since the death of Dr. Fuller has been its President. I think that it is fair to say that no one ever associated in the work has taken a keener interest in it or has stood more firmly for higher requirements and ideals. We trust that he may be induced to continue his work upon the Committee.

Enclosed herewith is a copy of the rules under which the Committee is now working, a set of questions used at the last examination and a list of the successful candidates of the year.

Respectfully submitted,

CHARLES A. TUTTLE, M.D.,

*Secretary.*

#### RULES FOR EXAMINATION.

1. Examinations will be held on the second Tuesday of March, July and November, at the City Hall, New Haven, beginning at 9.30 A. M., and lasting two days, closing at 4.30 P. M. of the second day.

2. Examinations will be conducted in writing in the English language, but practical demonstration may be expected in any or all branches.

3. Examinations for general practice consists of ten questions in each of the following subjects: 1 Anatomy. 2 Physiology. 3 Surgery. 4 Obstetrics, including Gynæcology. 5 Materia Medica, including Therapeutics. 6 Medical Chemistry and Hygiene. 7 Practice, including Pathology and Diagnosis. Questions in the specialties under respective headings.

4. In order to obtain a certificate of qualification the applicant must obtain a general average of 75 per cent. In no branch shall his percentage be less than 60, and in Practice, Obstetrics and Surgery the minimum requirement will be 65 per cent.

5. Examination fee, \$15.00, payable in advance on the first day of examination. Candidates once rejected may be reëxamined at any subsequent meeting of the Board but must pay full fee for each trial.



6. All candidates must be graduates of some reputable Medical College and must present their diplomas (or a certificate from the Dean of the Medical College) for inspection, to the Secretary of the Board at the opening of the session. As evidence of the required preliminary education, he must also present a diploma from an accepted high or preparatory school or documentary proof that his preliminary education is equivalent thereto. From and after January 1, 1914, no person can be admitted to the examination until, in addition to and succeeding the foregoing preliminary education, he shall have completed also satisfactory major courses of study of at least nine months' duration in Chemistry, Physics and General Biology before beginning the study of Medicine.

7. Each candidate must present his photograph as a means of identification. This will be retained and kept on file by the Secretary.

8. Formal application (blank enclosed) must be made to the Secretary at least five days before the date of the examination. This must be accompanied by a certificate of good moral character signed by two reputable citizens of this state.

9. Questions used at some former examinations will be found in the yearly Proceedings of the Connecticut Medical Society—the Board is unable to supply copies.

10. A license or an examination in another state is not accepted by this Board. All candidates must undergo regular examination. It is unlawful to practice in this State before examination and license. No temporary or provisional certificate can be given.

#### DIGESTS OF THE LAWS OF 1912.

*a.* No person shall, for compensation, gain or reward, received or expected, treat, operate or prescribe, for any injury, deformity, ailment or disease, actual or imaginary, of another person, nor practice midwifery, until he has obtained a certificate of registration, and then only in the kind or branch of practice stated in said certificate.

*b.* No person shall obtain a certificate of registration until he has passed a satisfactory examination before one of the

examining boards appointed for the purpose, nor until he has filed duplicate certificates signed by a majority of said examining board, stating that they have found him qualified to practice either medicine or midwifery, nor until he has filed duplicate statements subscribed and sworn to by him upon blanks furnished, giving his name, age, place of birth and present residence, stating of what medical college he is a graduate, and the date of said graduation, together with such other information as shall be required. No person shall be eligible to said examination until he presents to the board, by whom he shall be examined, satisfactory evidence that he has received a diploma from some legally incorporated and reputable medical college and complied with the requirements of the law concerning preliminary education. Any person passing such examination and filing said certificates and statement shall receive from the State Board of Health, upon payment of two dollars, a certificate of registration, which shall state that the person named has been found qualified so to practice. He shall be registered in the town wherein he resides or the town nearest thereto—but shall be entitled to practice anywhere in this State without further registration.

#### RULES FOR CONDUCTING EXAMINATIONS.

*First*, Help of every kind must be removed from the reach and sight of the candidate. Any candidate detected trying to give or obtain aid may be instantly dismissed from the room, and his or her paper for the entire work canceled.

*Second*, Questions must be given out and answers collected punctually at the time specified for that section.

*Third*, If the candidate withdraws himself or herself without permission from the sight of the examiner, his or her examination shall be closed.

*Fourth*, Pens, blotters, paper or blank books and ink will be supplied by the Secretary. No separate papers can be accepted unless thus supplied.

*Fifth*, The examination shall continue two days, the session of the first day being from nine-thirty to eleven, eleven to one, two to four, four to six, respectively; the session of the second

day being the same, but closing at four-thirty instead of six o'clock.

### EXAMINATIONS IN MIDWIFERY.

1. Examinations in Midwifery will be held on the second Tuesday of March, July and November at the same time and place as for General Practice, and under the same rules and requirements.

2. Applicants to practice Midwifery will be examined in Midwifery only and must obtain a marking of 75 per cent.

3. Examinations will be in writing; but may be taken in the language of the applicant, the applicant to furnish and pay an interpreter acceptable to the Board.

4. The examination fee will be \$10.00 and is payable at the time of taking the examination.

5. All applicants must be graduates of some reputable college or school of Midwifery and must present her diploma for inspection at the opening of the session. A photograph is also required.

### EXAMINATION QUESTIONS, NOVEMBER 12-13, 1912.

#### PHYSIOLOGY.

*(Two hours.)*

1. Define systolic, diastolic and mean arterial pressure. What is an approximate, normal adult pressure and how is it ascertained?

2. Leucocytes; (a) number, normally; (b) important conditions affecting the number; (c) classification of varieties; (d) functions.

3. Describe the different coats of the eye and give functions of each. Define myopia, hypermetropia and astigmatism; state the causes of each.

4. State the origin, production and uses of lymph.

5. (a) What purpose is served by the arrangement of valves in veins, and where are they most abundantly placed? (b) Where absent and why?

6. State the physiological functions of the kidneys; (a) give physical appearance, composition and amount of normal urine; (b) how determine the amount of urea excreted in 24 hours?

7. Discuss the distribution and function of the recurrent laryngeal nerve.

8. What causes and sustains the tonicity of the heart muscle?

9. What are carbohydrate foods, and, in the human economy, what are the uses of the same?

10. Briefly discuss stammering speech; what part of the nervous system is involved?

#### ANATOMY.

*(One and one-half hours.)*

1. Give the origin and insertion of the following muscles:—biceps (flexor cubiti), triceps, tibialis, anticus, rectus abdominis, levator ani (female subject).

2. Give the position of the facial nerve in relation to the parotid gland.

3. Describe the fissure of Rolando.

4. Show diagrammatically the "motor area" on the lateral surface of the brain, plotting roughly the center for the toes, ankle, knee, hip, trunk, shoulder, elbow, wrist, fingers, mouth, tongue, larynx.

5. Give the origin and course of the middle meningeal artery.

6. (a) Give the nerve supply of the palmar interossei. (b) Give the action produced by the palmar interossei.

7. Show diagrammatically the formation of the deep and superficial palmar arches, naming the arteries and showing by sketch how far down the hand arch extends.

8. Discuss the course of the ulnar nerve in the arm and forearm and give the names of the muscles to which it is supplied.

9. Give the boundaries and contents of the popliteal space.

10. Describe the bladder in the male.

11. Describe the prostate.

#### SURGERY.

*(Two hours.)*

1. You will be requested to take the blood pressure of a patient with a Janeway's sphygmomanometer, record the same on the first page of your paper, and explain why a frequent

blood pressure record would be desired in (a) removal of a thyroid; (b) general chloroform anæsthesia.

2. Describe in full detail the pathology, diagnosis and treatment of non-impacted fracture of the neck of the femur (collum femoris).

3. Describe the microscopical and gross pathology of scirrus carcinoma of breast.

4. Describe in full detail the operation you prefer for complete amputation of the cancerous breast.

5. Give the symptoms of obstruction of the common bile duct and exact directions for the surgical relief of the same.

6. Name the symptoms and signs which would cause you to trephine the skull immediately.

7. Give the history, symptoms (in order) and physical signs of typical appendicitis before rupture.

8. Give history, symptoms (in order) and physical signs of peritonitis arising from a pus tube on the right side.

9. Define and differentiate hernia in scrotum from hydrocele and varicocele.

10. Describe fully a supra-pubic cystotomy for stone in the bladder.

#### OBSTETRICS AND GYNÆCOLOGY.

*(Two hours.)*

1. (a) Give the positive signs of pregnancy. (b) When are they detected? (c) Name two signs and two symptoms of presumptive evidence of pregnancy.

2. Describe the structure of the placenta at full term.

3. Give the mechanism by which the ovum gains access to the tube after escaping from the ruptured follicle.

4. (a) In bimanual examination should one normally feel a hard ovary in any of the four fornices of the vagina? (b) If a mass is felt in either of the lateral fornices, what could it be? (c) What might a hard body in the posterior fornix be?

5. Describe briefly: (a) Fibrous polypi. (b) Mucous polypi. (c) What are the pedunculated Nabothian follicles?

6. (a) What is threatened abortion? (b) What is inevitable abortion? (c) What is incomplete abortion? (d) What is complete abortion? (e) Treatment of inevitable abortion.

7. (a) State the bacterial theory of eclampsia. (b) The auto-intoxication theory. (c) Your treatment when it occurs at full term.

8. (a) How do you recognize brow presentation? (b) What treatment do you advise?

9. (a) Give the blood changes in pregnancy. (b) What purposes do these changes conserve?

10. (a) Name five organisms that have been found to cause puerperal infection. (b) Give symptoms and treatment of sapraemia.

#### HYGIENE AND MEDICAL CHEMISTRY.

*(One and one-half hours.)*

1 and 2. Discuss thoroughly the prophylaxis of bubonic plague.

3 and 4. Discuss thoroughly the prophylaxis of typhoid fever.

5 and 6. Discuss thoroughly the prophylaxis of malaria.

7. What precautions should be observed by soldiers on the march to keep their feet in condition?

8. Describe the "Cameron Septic Tank."

9. (a) For what reason is "high pressure" steam sterilization superior to "low pressure" steam sterilization? (b) What is a simple means of projecting the sun's light into a room where there is a high, close confronting wall? (c) The advantages of the Welsbach light over the ordinary gas burner? (d) The advantages of incandescent lighting over gas or oil? (e) What is the composition of air by volume?

10. (a) Give Von Jaksch's test for the presence in the urine of diacetic acid. (b) What are the essentials for an accurate Fehlings test for sugar in the urine?

#### MATERIA MEDICA AND THERAPEUTICS.

*(Two hours.)*

1. Define Materia Medica. What is the official standard and how compiled? Define Therapeutics. What relation has the "official standard" to Therapeutics?

2. Define tincture, extract, ointment; illustrate each.

3. (a) What is an alkaloid? (b) Name the alkaloids of nuxvomica. (c) Differentiate the therapeutic uses and give dosage of the same.

4. (a) Name four drugs used hypodermatically, giving dosage; (b) what surgical and what clinical precautions should be observed in administration of each?

5. Name three cerebral sedatives. Give dose of each and method of administration.

6. Give definition of (a) serum therapy; (b) vaccine therapy; (c) illustrations.

7. What is meant by "opsonins" and what is the "opsonic index"?

8. (a) Write a prescription in Latin, non-abbreviated, containing four ingredients, which you would use for chronic bronchitis with abundant secretion, and give directions for its use; also write any instructions to the pharmacist which you think requisite; (b) likewise write a prescription for acute bronchitis.

9. (a) Give physiological action of santonin; (b) indications for its therapeutic use, method of administration and dose; (c) mention any dangers incident to its use; (d) likewise discuss oleum ricini.

10. (a) Should or should not physicians' prescriptions be written in Latin? (b) relative advantages and disadvantages of the same and reasons for your opinion.

#### PRACTICE, PATHOLOGY AND DIAGNOSIS.

*(Two and one-half hours.)*

1. (a) What are the causes of rheumatic fever? (b) Blood changes? (c) Order of frequency of joint involvement? (d) Complication?

2. (a) Name the modifications of the respiratory murmur. (b) Name the diseases in which they are most frequently observed.

3. State the pathogenesis of diabetes mellitus.

4. Describe and treat acetonemia.



5. (a) Give the symptoms of amyloid liver. (b) Diagnose it from leukemia.
6. (a) Define Ludwig's angina. (b) Nephrolithiasis. (c) Enterophthysis. (d) *Ascaris lumbricoides*.
7. (a) Describe paratyphoid fever. (b) Give symptoms. (c) How is it to be differentiated from typhoid?
8. (a) What is psoriasis? (b) Give symptoms. (c) From what must it be diagnosed? (d) Treatment.
9. (a) Name four types of headache. (b) Give conditions causing each. (c) How diagnosed from migraine?
10. (a) Give the physical signs of pulmonary consolidation in pneumonia. (b) Where does the solidification begin?

APPLICANTS QUALIFIED JULY 9 AND 10, 1912.

Kennedy, W. C., Georgetown, 1911.  
Prorechi, Joseph L., Md. Med., 1912.  
Peters, H. L. B., McGill, 1907.  
Biram, James H., Cornell, 1910.  
Greenstein, Charles G., Balt. Med., 1912.  
Finn, E. J., Yale, 1910.  
Churchman, John W., Johns Hopkins, 1902.  
Whitney, L. C., Md. Med., 1912.  
Smith, David P., Yale, 1912.  
Bonner, R. A., Md. Med., 1912.  
Wallace, W. G., Johns Hopkins, 1909.  
Falsey, Edward T., Yale, 1912.  
Garneau, James F., Georgetown, 1911.  
McDermott, M. T., Md. Med., 1910.  
Coyle, Anna E., Womans Med., 1912.  
Cogswell, E. S., Harvard, 1912.  
Sweet, John H., Jr., Tufts, 1912.  
Wells, Donald B., Johns Hopkins, 1912.  
McLaney, S. H., Columbia, 1895.  
White, H. R., Yale, 1912.  
Maine, T. P., Med. Chi., 1912.  
Carroll, Charles H., Yale, 1912.  
Callender, E. F., Yale, 1912.



Russell, Thomas H., Jr., Yale, 1910.  
 Fried, Harry, Yale, 1912.  
 Gross, Abraham B., Yale, 1912.  
 English, Chester F., St. Louis Med., 1912.  
 Monaghan, W. A., Univ. Penn., 1912.  
 Hurwitz, H. M., Yale, 1912.  
 Donnelly, W. H., McGill, 1903.  
 Noble, Charles G., Univ. Penn., 1912.  
 Howland, Edward T., Univ. Vt., 1911.

QUALIFIED NOVEMBER 12-13, 1912.

Woodward, Harold B., Johns Hopkins, 1912.  
 Weed, Arthur R., Univ. Vt., 1912.  
 Gaucher, J. A., Balt. Med., 1912.  
 Levine, S. S., P. & S., Balt., 1912.  
 Driscoll, William T., P. & S., Balt., 1912.  
 Freidman, Lewis J., Univ. Coll. Med., 1912.  
 Fox, Peter W., Univ. Vt., 1911.  
 Flynn, John F., P. & S., Balt., 1911.  
 Harris, J. E., Yale, 1912.  
 Garlick, George B., Yale, 1912.  
 Gessner, Francis E., Yale, 1912.  
 Thompson, D. C., Univ. Bell., 1911.  
 Petty-Manship, Frances, Womans Med., 1912.  
 Johnson, Gertrude C., Tufts, 1912.  
 Smith, Fred M., Univ. Vt., 1911.  
 Wright, Harold W., P. & S., N. Y., 1905.  
 Seqnalla, Earnest, Yale, 1912.  
 Crann, George E., P. & S., N. Y., 1901.  
 Smirnow, Max R., Yale, 1906.  
 Dye, John S. C., Vanderbilt, 1900.

QUALIFIED MARCH 11-12, 1913.

Affelberg, Isidor, Univ. Bell., 1909.  
 Kirschbaum, E. H., Yale, 1912.  
 Radom, Fanny, Womans Med., 1912.  
 Hasbrook, Charles J., P. & S., N. Y., 1905.

Hippolitus, Paul D., Yale, 1912.  
 Oven, Arthur K., Yale, 1912.  
 Crowley, F. G., Yale, 1912.  
 Comfort, Charles W., Jr., Yale, 1911.  
 Hirata, Isao, Yale, 1912.  
 Espisito, Joseph V., Jeff., 1912.  
 Carter, Earl B., Johns Hopkins, 1911.  
 Watts, J. F., Georgetown, 1912.  
 Nichols, Ralph W., Johns Hopkins, 1912.  
 Sweet, Grover C., P. & S., Balt., 1912.  
 Rogers, Platt H., Yale, 1912.  
 Scholl, Robert F., Yale, 1912.

(7) Report of Committee on Scientific Work:

REPORT OF COMMITTEE ON SCIENTIFIC WORK.

*Mr. President and Gentlemen of the House of Delegates:*

The Committee on Scientific Work presents the accompanying programme for this annual meeting of our State Society. In its preparation we have followed the usual custom of dividing the subjects so that the scientific session on the first day is devoted to the specialties in medicine, while the two sessions on the second day are assigned to medicine and surgery respectively. The Chairman's eight years' association in the arrangement of these annual programmes has led him to believe that this method should be continued, as it is productive of satisfactory results. It was first suggested by Dr. Gustavus Eliot of New Haven, when he was chairman of this Committee in 1905.

PROGRAMME.

WEDNESDAY AFTERNOON, MAY 21, 1913, 2 P. M.

*The Question of Balance*—Dr. Ansel G. Cook, Hartford. (Discussion opened by Dr. Oliver T. Osborne, New Haven, and Dr. William Porter, Jr., Hartford.)

*The Clinical Significance of Vertigo*—Dr. Charles A. McKendree, Cromwell. (Discussion opened by Dr. Charles N. Haskell,

Bridgeport; Dr. Henry L. Swain, New Haven, and Dr. Frank K. Hallock, Cromwell.)

*The Work of the Infant Welfare Association of New Haven*—Dr. Joseph I. Linde, New Haven. (Discussion opened by Dr. Julia Teele, New Haven, and Dr. Harry M. Steele, New Haven.)

*Dr. Eli Todd and the Early Days of the Hartford Retreat*—Dr. Charles W. Page, Hartford.

*The Treatment of Chronic Suppurative Lacrymal Disease*—Dr. E. Terry Smith, Hartford. (Discussion opened by Dr. E. Dorland Smith, Bridgeport, and Dr. Arthur N. Alling, New Haven.)

THURSDAY MORNING, MAY 22, 1913, 9.30 A. M.

*Pseudo-Ileus Due to Intestinal Nerve Impulse Disturbances*—Dr. Patrick J. Cassidy, Norwich. (Discussion opened by Dr. Joseph M. Flint, New Haven, and Dr. Oliver C. Smith, Hartford.)

*The Study of Infection by Means of Gentian Violet*—Dr. John W. Churchman, New Haven. (Discussion opened by Prof. Leo. F. Rettger, New Haven.)

*The Use of Bone-Graft in Surgery*—Dr. James L. Moriarty, Waterbury. (Discussion opened by Dr. Ernest H. Arnold, New Haven, and Dr. William H. Carmalt, New Haven.)

*Prolapse of the Uterus*—Dr. Otto G. Ramsay, New Haven. (Discussion opened by Dr. Phineas H. Ingalls, Hartford.)

THURSDAY AFTERNOON, MAY 22, 1913, 2.30 P. M.

*The Present Status of the Röntgen Ray in Diagnosis*—Dr. Arthur C. Heublein, Hartford. (Discussion opened by Dr. Thomas N. Hepburn, Hartford; Dr. Orrin R. Witter, Hartford, and Dr. Harry W. Fleck, Bridgeport.)

*Pyelitis*—Dr. Charles J. Bartlett, New Haven.

*Acute Primary Pyelitis in Children*—Dr. Fritz C. Hyde, Greenwich. (Discussion opened by Dr. John W. Churchman, New Haven; Dr. H. Merriman Steele, New Haven; Dr. Charles A. Goodrich, Hartford, and Dr. George Blumer, New Haven.)

*The Use of Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis*—Dr. David R. Lyman, Wallingford. (Dis-

cussion opened by Dr. H. S. Wagner, Hartford, and Dr. Henry F. Stoll, Hartford.)

Respectfully submitted,

WALTER R. STEINER.

DR. WALTER R. STEINER (Hartford): I would suggest that next year, it being the anniversary of the founding of the Yale Medical School, we substitute for the scientific programme of the first afternoon of the meeting, when papers on special subjects are usually read, clinics and demonstrations by the professors of the Yale Medical School, to be given at the University and at the New Haven Hospital.

THE PRESIDENT: The next is the Report of the Committee on Honorary Members and Degrees, of which Dr. Frank K. Hallock, of Cromwell, is chairman. He is not here, so we will pass to the Report of the Committee on Arrangements. Dr. Everett J. McKnight is the chairman of this Committee, and he is still absent; but perhaps some other member of the Committee can make the report.

DR. CHARLES D. ALTON (Hartford): As the second member on that Committee, I would say that we are expecting Dr. McKnight, and that he may be here before the transactions of the morning are finished. Shall we wait for him, or shall I tell you what I can?

THE PRESIDENT: I think we had better hear from Dr. Alton.

DR. CHARLES D. ALTON: We have arranged a smoker to be held here this evening, by the courtesy of the Hartford Medical Society. That smoker will begin at eight o'clock, or as early as you please to come.

The banquet will be to-morrow evening, in the building adjoining, the Hartford Club; and that will be at seven o'clock. I might say that I have in my pocket tickets for the banquet, if anyone wishes to obtain them. I hope that a large number will remain; because a number of speakers have been invited and other arrangements have been made, so that we feel that the evening will be exceedingly pleasant for you. I do not know that there is anything else for me to say.

DR. O. C. SMITH (Hartford): In relation to the banquet, I wish to say that the entrance is not through the front of the Hartford Club, but down the mutual driveway and then to the right.

(8) Report of Committee on Public Policy and Legislation:

REPORT OF COMMITTEE ON PUBLIC POLICY AND  
LEGISLATION.

At the annual meeting of the House of Delegates in New Haven on May 23, 1912, the Chairman of the Committee on Public Policy and Legislation was instructed to request the State Board of Health to review the Eva Ginsberg case.

The Chairman of the Committee on Public Policy and Legislation respectfully reports that inasmuch as many members of the said State Board of Health were out of town at the time of the July meeting of said Board and only routine business would be transacted, he deferred taking action until the regular meeting of the Board on October 17, 1912. At that time he personally appeared before the Board and requested it to review the case, giving, as he thought, good and sufficient reasons why this should be done and leaving with it for reference a communication of which the following is a correct copy:

*Connecticut State Board of Health, Hartford, Conn.:*

GENTLEMEN:—At the annual meeting of the Connecticut State Medical Society held in New Haven on May 22 and 23, 1912, the House of Delegates unanimously instructed the Chairman of the Committee on Public Policy and Legislation to request the State Board of Health to review the case of Eva Ginsberg of New Britain, a revocation of whose license to practice midwifery had been requested by the entire membership of the Society of Regular Physicians of New Britain.

After careful consideration of the case the Chairman of the Committee on Public Policy and Legislation finds that in the year 1905 Eva Ginsburg was convicted of manslaughter following criminal abortion, a felony for which she served one year in jail; that on December 2, 1910, the Society of Regular Physicians of New Britain furnished the State Board of Medical Examiners, through which said Eva Ginsburg had obtained her license to practice midwifery, with a certified copy of Mrs. Ginsburg's conviction, asking the said Board to request the State Board of Health in its official capacity to revoke her license as a midwife; that there was

immediately forwarded by the Secretary of said Board of Examiners to the State Board of Health a request signed by every member of said Board of Examiners that said Eva Ginsburg's license be revoked; that the matter was in the hands of said State Board of Health for a long time and that their final refusal to revoke her license was said to be due to the length of time which had elapsed between her conviction and the request for the revocation of her license and the opinion of certain members of said State Board of Health that said Eva Ginsburg was being persecuted by certain members of the Society of Regular Physicians of New Britain whose practice was being interfered with by her.

As regards the former, the Chairman of the Committee on Public Policy and Legislation finds that the State Board of Health admitted that the statute of limitations had no application in this case. As regards the latter, he has made a careful investigation and finds that the physician who was suspected of endeavoring to persecute Mrs. Ginsburg was only called into the case sometime after the request for the revocation of her license had been filed and then only as an interpreter; that the length of time which had elapsed between her conviction and the request for the revocation of her license is sufficient evidence that no persecution was thought of, or intended, it only having been made after she had for some time been openly engaged in the practice of medicine and gynecology without a license.

The Chairman of the Committee on Public Policy and Legislation fails to understand why the State Board of Health should not have at an early date issued an order for the revocation of the license to practice midwifery in the case of Mrs. Eva Ginsburg in accordance with the spirit and intent of the law in such cases provided. Having failed to take such action at the proper time, said Chairman of the Committee on Public Policy and Legislation is of the opinion that it is the duty of said State Board of Health to review the case and if possible to revoke said license in order that a most unfortunate precedent may not be established in cases of this kind.

As Chairman of the Committee on Public Policy and Legislation of the Connecticut State Medical Society, acting under instructions from that organization, I urgently request your honorable body to review the case of the revocation of the license of Mrs. Eva Ginsburg and give it your careful and unbiased consideration.

Very truly yours,

E. J. McKNIGHT,  
*Chairman.*

At this meeting the history of the case was gone over very carefully and later the following communication was received from the State Board of Health:



November 8, 1912.

*Dr. E. J. McKnight, Chairman, Committee on Public Policy and Legislation, Conn. State Medical Society, Hartford, Conn.:*

DEAR SIR:—Replying to the written communication submitted by you to this Board at its last regular meeting, October 17, 1912, we would say that under date of December 5, 1910, this Board received a communication from the Medical Examining Board as follows: "That the members of the Connecticut Medical Examining Board, because of records herewith submitted, request you to revoke and cancel the certificate of registration granted by you in 1902 to Eva Ginsberg." The record submitted was a record of the conviction of Mrs. Ginsberg for manslaughter following abortion in December, 1905. After paying the penalty for this conviction, Mrs. Ginsberg returned to New Britain, her home, and continued in the practice of midwifery as she had before for a period of four years, without complaint of anybody.

The communication of the Medical Examining Board was brought before this Board at its next regular meeting in January, 1911, and was postponed until the April meeting of the Board, when it was voted to notify Mrs. Ginsberg to appear and show cause why her license should not be revoked. At a special meeting of the Board, holden on the 26th day of May, 1911, a full hearing was had in the case. The case was further adjourned and an opportunity given to the physicians of New Britain who might have some knowledge of her conduct as midwife to appear before the Board, and after a full hearing the Board passed the following vote:

"That on May 3, 1912, the State Board of Health had under consideration the application of the Connecticut Medical Examining Board to revoke the license to practice midwifery of Mrs. Eva Ginsberg of New Britain, granted her by this Board in 1902. The only evidence offered which we could consider was her conviction in the Superior Court of Hartford County at the December, 1905, term. In view of the long time that has elapsed since her conviction, and in view of the further fact that this Board is of the opinion that Eva Ginsberg has not intentionally violated the law since that time, we do not feel justified in revoking her license."

This Board has further considered the matter as presented verbally by you and in the written communication, and has voted to adhere to its original vote for the reasons therein stated.

Yours very truly,

CONNECTICUT STATE BOARD OF HEALTH,

JOSEPH H. TOWNSEND, *Secretary.*

Never in the history of this Society have so many measures been introduced into our General Assembly as we have had

confronting us at this Session and never for several years has your Chairman felt so uncertain as to the results as he did early in the Session.

Through the efforts of Dr. Frank K. Hallock, an ex-President of this Society, a Committee of five appointed by the President of the Connecticut Bar Association met a Committee consisting of E. J. McKnight, F. K. Hallock, W. H. Carmalt, George Blumer and S. B. Overlock, appointed by the President of the Connecticut State Medical Society, and as a result three bills relating to Expert Medical Testimony were drawn up and introduced into the present Session of the General Assembly.

[House Bill No. 642.]

An Act concerning Commitments of Persons Charged with Crime where Insanity is a Defense, as follows:

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. When a person is charged with a criminal offense, or is committed to jail on a criminal charge by a justice of the peace, city or town court, the judge of the Superior Court before whom such person is to be tried, or is being tried, may, after hearing, if a defense of insanity will be made, order such person into the care of the superintendent of the State Hospital for the Insane at Middletown, or at Norwich, to be there detained and observed until further order of such judge, or of the Superior Court held for the transaction of criminal business, in the county wherein the crime is alleged to have been committed.

SEC. 2. Whenever any person charged with a criminal offense has been put to plead for such offense, his counsel, if it is intended that a defense of insanity will be made, shall, at the earliest possible time before the commencement of the trial before a jury, inform the court in writing of such defense.

[House Bill No. 643.]

An Act concerning the Personal Examination of Plaintiffs in Action for Personal Injury, as follows:

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. After the filing of the complaint in all civil actions brought for the recovery of damages for personal injuries not resulting in death, the defendant, upon written notice, made to and granted by the court, shall have the right to reasonable personal examinations of the person



injured at such times and places as the court may order by not exceeding two reputable physicians or surgeons to be named by the defendant in said motion.

SEC. 2. The plaintiff shall have the right to object upon reasonable grounds to any physician or surgeon named, and the court shall determine the reasonableness of such objection.

SEC. 3. Whenever the court shall sustain the plaintiff's objection the defendant shall have the right to substitute another physician or surgeon in place of the physician or surgeon objected to.

SEC. 4. Failure to comply with such order of the court shall be ground for non-suit.

[House Bill No. 647.]

An Act concerning Medical or Surgical Expert Witnesses in Criminal Cases, as follows:

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

No person shall be qualified to give his opinion as a medical or surgical expert witness in any criminal action until he shall have entered, or offered to enter, into a full and complete conference with the medical or surgical expert or experts to be called on the opposing side, as to the facts upon which he shall be asked to base an opinion.

Before introduction into the Assembly these bills were approved by the Bar Association at a regular meeting and a committee was appointed to aid in securing their passage. At the hearing before the Judiciary Committee the bills were ably explained and their passage recommended by Mr. Hadlai A. Hull, President of the State Bar Association of Connecticut, and others, but without avail, as they were reported upon unfavorably by the Committee and have been rejected by the House and Senate.

It seems impossible at the present time to secure the passage of any measures of this nature. It remains for this Society to take some action which shall in some way regulate the matter.

After careful consideration your Chairman recommends the adoption of the following resolutions:

RESOLVED, That it is advisable that wherever possible the members of this Society adopt the so-called Leeds method of preliminary consultation by medical witnesses on both sides of the case as to its status.

[COMMENT BY DR. MCKNIGHT: A number of years ago, the physicians of Leeds, England, made an agreement among themselves that they would not testify on any medical question without having had an opportunity for a consultation with the medical experts on the other side, just as they would consult over a private patient in order to see whether they could reach a correct conclusion. This plan worked very well there, and is being tried in other places. It saves much time and expense. I think that if we could all adopt that scheme, it would save us a great deal of trouble.]

RESOLVED, That it is the sense of this Society that it is inadvisable and objectionable for any of its members to occupy the position of Medical Advisory Counsel in open court and at the same time to act as expert witness in a medico-legal case.

[COMMENT BY DR. MCKNIGHT: That is, a man who is an expert witness should not assist the legal counsel in conducting the case.]

RESOLVED, That we regard the acceptance by a physician of a fee that is contingent upon the result of a medico-legal case as not in accordance with medical ethics and derogatory to the good repute of the profession.

House Bill No. 237, establishing a State Farm for Inebriates, was introduced largely through the efforts of Dr. F. H. Barnes of Stamford working in connection with the Association of Probate Judges, and the State Temperance Society. A substitute bill, carrying a smaller appropriation, has been reported favorably by the Committee on Humane Institutions and on Appropriations and will probably be passed.

Several bills regulating the sale of narcotic drugs were introduced. A substitute for these bills, H. B. 980, was reported favorably, has been re-committed and so far as I know has not been reported back to the House.

Two bills relating to privileged communications were reported upon unfavorably and were rejected.

House Bill No. 305, an Act amending an Act concerning operations for the prevention of procreation, was reported upon favorably by the Committee, has been re-committed and has not been reported back to the House.

A bill for the extermination of mosquitoes is still under consideration.

House Bill No. 446, requiring a special form of death certificate where death occurs after six months after the administration of any serum or antitoxin or after surgical operations, was reported upon unfavorably by the Committee and has been rejected.

Senate Bill No. 290, requiring that all hospitals receiving State aid shall use the same for the benefit of the deserving poor as the Board of Charities, etc., shall direct, was reported upon unfavorably, has been rejected in the Senate and is still before the House.

House Bill No. 296, exempting cancer from the provisions of the Medical Practice Act in the interest of a certain Mr. Main, has been rejected in both houses, as is also the case with House Bill No. 712, granting a special license to Barney Gilchrist of New Haven to treat cancer.

At the request of one of the Health Officers of the State an amendment to that part of the Medical Practice Act controlling the practice of midwifery was introduced, has been reported upon favorably but has been re-committed.

House Bill No. 298, amending the Osteopathic Bill, was merely a change in the wording of the law which would enable osteopaths in this state to secure reciprocal relations with osteopaths in other states but which gave them no additional powers and was not objectionable. It was, however, reported upon unfavorably by the Committee, rejected in the House, re-committed in the Senate, has been favorably reported by the Committee and will probably be passed before adjournment.

House Bill No. 285, the Optometry Bill, was the least objectionable of any which has ever been introduced, simply calling for examination and registration. As it was necessary that some action should be taken to prevent fakers selling cheap glasses from imposing upon the public, your Committee withdrew all objections to the bill upon the agreement on the part of the Optometrists that they would insert a clause preventing anyone who receives a license under the provisions of the Act from using

the title "Doctor" either as a prefix or otherwise. This has been reported upon favorably and will probably be passed.

House Bill No. 297, the Anti-Vaccination Bill, was given two hearings before the Committee, was unanimously reported upon unfavorably and has been rejected in both houses.

House Bill No. 98, concerning the practice of Naturopathy, gave us a very lively hearing. The term Naturopathy in this bill included the practice of psychotherapy, mechanotherapy, chiropractic, biochemistry, hydrotherapy, the Kneipp system, manual manipulation, Swedish movements, spondylotherapy, suggestive therapeutics, electrotherapy, food science, concussion of the spine and all other systems of treatment by natural methods. The bill was reported upon unfavorably by the Committee, only one member favoring it. The motion to reject the bill was lost in the House and it was tabled for calendar and printing. It was twice under consideration and tabled and at one time it looked as though it might pass the House, as many members felt that as these men were already engaged in their practices it would be much better to have them regulated in some way. Some of these, however, were willing to advocate an amendment similar to the clause inserted in the Optometry bill which would make it unlawful for any person licensed under the provisions of this Act to use the title "Doctor" either as a prefix or otherwise. When it was evident to the advocates of the bill that it could be passed only with the addition of this amendment they ceased working for the bill and it was indefinitely postponed in the House and rejected in the Senate.

[COMMENT BY DR. MCKNIGHT: I put into the hands of several men, some of whom were really favoring the bill, copies of this amendment; and when the advocates of the bill found that it was very probable that if the bill did go through, it would contain that amendment attached to it, they preferred to have the thing go by, rather than lose the right they now have to use the title "Doctor." Therefore, the third time the amendment had been put into the hands of several Representatives, they ceased to work for it. It was indefinitely postponed in the House, and rejected in the Senate.]

House Bill No. 445, the Chiropody Bill, with amendments prohibiting the use of the title "Doctor" and exempting practitioners holding certificates to practice any branch of the Healing Art issued under the authority of this State, is not objectionable and will probably be passed.

[COMMENT BY DR. MCKNIGHT: This bill, in its original form, was very objectionable. I thought that it was the kind that has been introduced all over the United States by the three bodies, the proprietary medicine men, the men who are hit by the Pure Food and Drug Bill, and the Christian Science Church. Their bills have been introduced all throughout the Union to undermine the profession. I supposed that this was one of them, because no physician could have treated any disease of the extremities or burned off a wart without having been licensed as a chiropodist and having paid his five dollars, without a five hundred dollars fine. I do not think that this was intended, but it would have held. With the changes made, however, the bill is unobjectionable.]

Taken as a whole the results have been much more satisfactory than we could have expected under existing conditions, and I wish to take this opportunity of thanking the members of the Committee and the individual members of this Society who responded so ably to calls for special work in this direction.

Respectfully submitted,

E. J. MCKNIGHT.

(9) Report of Delegate to Conference of the American Medical Association on Medical Education and Medical Legislation:

#### REPORT OF DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION.

The ninth annual Conference of the American Medical Association on Medical Education and Medical Legislation was held in Chicago on February 24 and 25 of this year. It is impossible in this report to give any detailed account of the papers and discussions. As usual, your Delegate obtained much valuable

information from contact and conversation with men from other states who were actively engaged in legislative work, which has been of great service to him in connection with the work of the last few months.

The first day's session was presided over by Dr. Arthur D. Bevan, who spoke upon the "Third Classification of Medical Colleges," after which followed the Secretary of the Committee, Dr. N. P. Colwell, on "Improvement in Medical Schools." Attention was particularly called to the decrease in the number of medical schools from 166 in 1904 to 110 at the end of the present college session. This has been brought about partly by the disappearance of the commercial schools, but more largely through the merger of several small schools into one larger and stronger school. This, however, has not been detrimental to medical education. It has resulted in reducing the abnormal over-supply to a smaller number and a better grade of medical schools.

Papers were read by Abraham Flexner of the General Education Board, New York City, on "The European Side of Medical Education"; by President Harry Pratt Judson, University of Chicago, on "Necessity of a Readjustment of Preliminary and Collegiate Education"; by Dr. Edward H. Bradford, dean of the Harvard Medical School, and Mr. Charles F. Thwing, president of Western Reserve University, Cleveland, on "Organization of the Medical School"; by Dr. Horace D. Arnold of Boston, on "Hospitals and Their Relationship to Clinical and Postgraduate Medical Teaching"; by Dr. Herbert Harlan, president of the Maryland State Board of Medical Examiners, on "The Importance of Harmony and Uniformity in the Work of State Examining Boards"; by the president-elect of the American Medical Association, Dr. John A. Witherspoon, on "The Medical Profession and Medical Education."

Dr. Henry B. Flavel, chairman of the Committee on Health and Public Instruction, presided over the second day's session and spoke on "The Public and the Profession." Dr. Cressy L. Wilbur reported for the Committee on Revision of the Model Law on Vital Statistics. The Report of the Committee on



Expert Medical Testimony was read by Dr. Harold N. Moyer, Chicago, chairman. The conclusions of the committee are as follows:

From a consideration of all the facts, the committee feels justified in advancing the following conclusions: 1. The present system of introducing expert medical evidence is admittedly faulty. 2. Any change, if made, should be done with great caution and only after mature deliberation. 3. The present inexact state of medical science does not warrant the invasion of the province of the jury or the abridgement of cross-examination. 4. The only change at present justified is one altering the manner in which experts are to be summoned. 5. The appointment of official experts is not advisable. 6. The hypothetical question as commonly used in our courts should be simplified.

To me one of the most interesting papers was that on "The Police Power of the State and the Practice of Medicine," by Mr. A. C. Umbreit, attorney for the Wisconsin State Board of Medical Examiners, who explained a new practice act pending before the Legislature of Wisconsin, the purpose of which is to eliminate from legal requirements for the practice of the healing art all sectarianism, schools or systems of practice, and base such requirements entirely on educational and professional training and fitness. Those who pass the required examination will be licensed to practice the healing art in Wisconsin. Anyone may practice any branch of medicine but must put upon his sign his prescription pads or in some way display this statement: "Not licensed to practice the healing art in Wisconsin." This is in line with a growing tendency toward a practice act which will allow anyone to practice medicine in any way he wants without a license, while the state protects the individual by defining to him those who are qualified, those who have passed the requisite examination and have been licensed to practice medicine, so he cannot make a mistake.

[COMMENT BY DR. MCKNIGHT: The Supreme Court has questioned the constitutionality of many of the medical practice acts; and before long, some of them will probably be declared unconstitutional, as interfering with personal rights. Dr. Harris of

Chicago brought up the matter a few years ago, and I think he is right. He thinks that the medical practice act of the future will require a rigid examination for the right to use the title "Doctor." Anyone else can practise, but cannot use the title under severe penalty. Then anyone can learn who the efficient men are. No one but those who are licensed to practise the healing art can use the title "Doctor." It is in line with this idea that, in the three bills mentioned, we have tried to have that feature introduced.]

Dr. Mark W. Richardson, Secretary of the State Board of Health of Massachusetts, read a paper on "The Control of Ophthalmia Neonatorum in Massachusetts," and a paper on "Health Organization in Schools" was read by Dr. E. B. Hoag of Minneapolis.

The Committee on Credentials, of which your Delegate was Chairman, reported favorably on the following resolution introduced by Dr. W. B. Cannon of Boston:

WHEREAS, Several bills intended to regulate interstate commerce in habit-forming narcotic drugs have been introduced in Congress:

RESOLVED, That the Council on Health and Public Instruction and the members of the Annual Conference on Medical Legislation of the American Medical Association hereby express their approval of all legislative efforts which may be necessary to restrict the employment of habit-forming drugs to proper and legitimate uses.

Respectfully submitted,

E. J. McKNIGHT.

(10) Report of Committee on Medical Inspection of Schools:

#### REPORT OF COMMITTEE ON MEDICAL INSPECTION OF SCHOOLS.

*Mr. President and Gentlemen of the House of Delegates:*

Your Committee has held a number of meetings during the past year. A bill was introduced in the Legislature amending the present school inspection law. Its purpose was to require some



form of school inspection in the forty towns of this State having five thousand inhabitants or more. It was found that the small towns were united in opposition to any form of compulsory medical inspection. The Committee on Education therefore disapproved the bill and it was rejected.

Whatever development we are to get in school inspection must come through education of the citizens in the benefit of such inspection. The responsibility as to the measure of success rests upon the shoulders of those physicians who are school inspectors. They must show, in the districts where there is at present inspection, that the benefit far outweighs the expense.

I have written the school superintendents of the larger towns and find very little change from the conditions reported last year.

In New London, a physician is assigned to each one of the public schools. He makes one visit each week, examines the cases reported by the school nurse and receives \$3.00 per visit.

New Haven at present has two doctors who are paid \$1,000.00 and five nurses who are paid \$600.00 annually.

In Bristol, there is medical inspection by both doctor and nurse. The appropriation is \$1,000.00 for salaries and \$50.00 for sundries and the work is done by the school board.

Greenwich pays their medical inspector \$800.00 and nurse \$450.00.

East Hartford pays \$100.00 for two physicians for one examination each year—the teachers sending suspicious cases to them.

In Plymouth, the Social Service Club pays the health officer for one inspection each term.

“Health makes wealth” applies to school children. Connecticut has been justly proud of her public schools. It requires improved school hygiene for her to hold a position in the vanguard.

Respectfully submitted,

E. W. GOODENOUGH.

THE PRESIDENT: Next in order is the report of Delegates to the American Medical Association, Dr. McKnight and Dr. D. Chester Brown, of Danbury.

DR. E. J. MCKNIGHT (Hartford): Dr. Brown and I have taken turns in making this report. He is not here, but telephones that he would be here after seven o'clock. He will, therefore, make the report later in the session. It is his turn to make the report now.

THE PRESIDENT: The next business is the nomination of Honorary Members.

DR. WILLIAM H. CARMALT (New Haven): I beg to submit, through the Committee, the name of Dr. William C. Gorgas as a candidate for Honorary Membership next year. That has to lay over a year; but it seems to me eminently fitting that Connecticut, or any other State, should recognize Dr. Gorgas's work, which has certainly been of the very highest character. Indeed, one may say perfectly well, whatever may be said about the magnificence of the engineering work and the honor conferred upon Colonel Goethals, that Dr. Gorgas has made the work of Colonel Goethals possible.

THE PRESIDENT: Is a motion necessary?

DR. WILLIAM H. CARMALT (New Haven): Not under the rules.

THE PRESIDENT: The nomination is just accepted. That completes the various reports of those committees whose members are here, and brings us to Miscellaneous Business. Has the Secretary any to bring up?

THE SECRETARY: None that I know of.

DR. P. J. CASSIDY (Norwich): Mr. Chairman, owing to the fact that there will be some Miscellaneous Business to consider later, I move that we adjourn now and reassemble after the literary meeting this afternoon.

The motion was seconded.

DR. WILLIAM H. CARMALT (New Haven): There is another meeting of the House of Delegates, anyhow, is there not?

DR. P. J. CASSIDY (Norwich): Not unless it is an adjourned meeting.

THE PRESIDENT: I think that the custom is to adjourn until some fixed time. We hold another meeting only by vote. I think that Dr. Cassidy's motion is all right. You have heard the motion, gentlemen. Are there any remarks?

DR. G. ELIOT (New Haven): I should like to inquire whether there is a meeting to-morrow morning.

DR. O. C. SMITH (Hartford): The House of Delegates meets to-morrow morning.

THE PRESIDENT: It is not printed on the programme.

DR. G. ELIOT (New Haven): I move that we adjourn until to-morrow morning at nine o'clock.

DR. WILLIAM H. CARMALT (New Haven): I would call attention to the fact that the Board of Councilors present nominations on the first day of the general session.

DR. O. C. SMITH (Hartford): They have been presented, and will be acted on to-morrow morning. You were up-stairs with the Auditing Committee when I read my report as Chairman of the Council, which contained them.

DR. W. L. HIGGINS (South Coventry): Before the motion is put, inasmuch as I may not be able to be present to-morrow morning, I should like to speak now. I have a little matter of business to present from the Tolland County Medical Society, and this will take but a moment. I should like to present it now, if possible.

THE PRESIDENT: The first motion was that we meet this afternoon after the close of the Scientific Session. I will put that motion first. All those in favor of this will say "aye"; contrary minded, "no." My opinion is that it is a vote in the affirmative. Is my decision questioned? Will that meet your requirements, Dr. Higgins?

DR. W. L. HIGGINS (South Coventry): That depends upon what hour the House of Delegates' meeting is to be held at this afternoon. Not having made preparations to stay over, I shall have to leave this building by half-past four or a quarter to five o'clock.

It was moved and seconded that a few minutes be given Dr. Higgins in which to present the matter.

THE PRESIDENT: All those in favor of this motion will signify it by saying "aye"; contrary minds, "no." It is a vote.

DR. W. L. HIGGINS (South Coventry): I was requested by the Secretary of the Tolland County Medical Society to present the names of several members of our Association for whom the County Medical Society thought the dues ought to be remitted, and that they should be retained as members of the Association. The first of these names is that of Dr. Frederick Eugene Johnson of Mansfield, who has been retired from full active practice for several years, on account of bad health, and probably will not resume practice again. He occasionally takes a case, and that is all. He will be dropped, unless his dues are remitted, from our Society. We wish to retain him, because he has long been a faithful member. By vote of the County Society, his name has been recommended for remission of dues, and I will make a motion that his dues be remitted for the future.

The motion was seconded.

THE PRESIDENT: Gentlemen, you have heard the motion. Are there any remarks? If not, all those in favor of it will signify their assent by saying "aye"; contrary, "no." The motion is carried.

DR. W. L. HIGGINS (South Coventry): One of the men asked how old Dr. Johnson is. I think that he is sixty-four. Another case is that of Dr. John Patrick Hanley of Stafford Springs, who, on account of tuberculosis, has been incapacitated. He is one of our younger members, and has not been able to practise to any extent; and the Tolland County Society thought that his dues should be remitted until further action. I move that this be done.

The motion was seconded.

THE PRESIDENT: All who are in favor of this motion will say "aye"; contrary minded, "no." It is a vote.

DR. W. L. HIGGINS (South Coventry): The third case is that of Dr. Isaac Parsons Fisk of Coventry, who, partly through ill health, and partly for other reasons, feels that he is unable to pay the annual dues of five dollars. He said last year that he would have to ask to be dropped. The Society does not wish to lose him; and I would ask, as he is a man over sixty

years of age, that his dues be remitted until further action is taken.

The motion was seconded.

THE PRESIDENT: All those in favor of this motion will signify it by saying "aye;" contrary minds, "no." The "ayes" have it, and Dr. Fisk's dues are remitted.

DR. W. L. HIGGINS (South Coventry): I thank you.

It was moved and seconded that the House of Delegates adjourn, to meet in the same room that afternoon, after the close of the Scientific Session.

THE PRESIDENT: All in favor will say "aye"; contrary, "no." It is a vote.

Adjourned at 1.30 P. M.

### WEDNESDAY AFTERNOON, MAY 21, 1913.

The meeting was called to order at 5.08 P. M.; the President, Dr. Edward T. Bradstreet of Meriden, in the Chair.

THE PRESIDENT: Please come to order, gentlemen. I think it will not be necessary to have the roll called, as this is the second meeting of the House of Delegates. We have now come to Miscellaneous Business. (Twenty-one members were present.)

DR. W. L. HIGGINS (South Coventry): If I might, at this point, I should like to convey to you an invitation from the Tolland County Medical Association for the State Society to meet with us for its semi-annual meeting, next autumn. I might say that our County Society has an invitation from our honored ex-President, Dr. Everett J. McKnight, to hold our meeting on that occasion at his summer home, which is "Millstone," in the town of Ellington, near Rockaway.

DR. WILLIAM H. CARMALT (New Haven): Is Dr. McKnight's summer residence in Tolland County?

DR. W. L. HIGGINS (South Coventry): Yes, sir; it is.

It was moved and seconded that the invitation be accepted.

THE PRESIDENT: All those in favor of this motion will say "aye"; contrary minded, "no." It is unanimously voted to accept the invitation.

DR. P. J. CASSIDY (Norwich): I move that the privileges of the floor, at the meeting of the House of Delegates, at this Session, be granted to the Past-Presidents and other officers of the Connecticut Medical Society.

The motion was seconded.

THE PRESIDENT: You have heard the motion, gentlemen. Are there any remarks? All those in favor of the motion signify by saying "aye"; contrary minded, "no." It is a vote.

DR. CHARLES D. ALTON (Hartford): I have a little matter of business that Dr. Kate C. Mead of Middlesex County asked me to bring before you. She was appointed by the American Medical Association as the Chairman of a sub-committee of the Council on Health and Public Instruction, called the Committee for the Public Health Education of Women; and that Committee in Middlesex County has been doing some work for the medical education of women and young people in that County. It may be a question how far the State Society wishes to act in accordance with the American Medical Association; but this is a matter that I have been asked to present and I will read this:

"The following action was passed at our County Meeting last Thursday:—Moved that the Middlesex Medical Society approves the work of the Committee for the Public Health Education of Women, appointed by the American Medical Association, a sub-committee of the Council on Health and Public Instruction, and recommends the incorporation of this Committee in the work of the State Society. This is in accordance with the by-laws of the Society, as follows:

Chapter I, Section 2. Purposes.

Chapter III, Section 6. House of Delegates.

Chapter VIII, Section 3. Public Policy and Legislation.

I have been the Connecticut State Secretary of the above Committee for two years. We have had lectures and milk-station work, etc., in many parts of the State. I am now resigning and would like to see the work taken over by the State Society, and I would recommend Dr. Maude Taylor, as Secretary, in my place, for she has been an efficient County Chairman for two years and knows what the Committee tries to do for the health of the women and girls of Connecticut."

I would move that this matter be referred to one of our committees—perhaps the one on Public Policy and Legislation; and that this Committee should be asked to report on it at the



next meeting of the House of Delegates—that is to-morrow. This will bring the matter before us with some recommendation from a committee. The members of that Committee are familiar, I think,—Dr. McKnight, at least—with this subject; and it seems to me very proper to have the matter referred to a committee and let it report to-morrow morning.

The motion was seconded.

THE PRESIDENT: The motion has been made and seconded, are there any remarks? All those in favor will signify it by saying “aye”; contrary minded, “no.” It is referred to the Committee on Public Policy and Legislation.

DR. GEORGE THOMPSON (Taftville): I wish to make a motion to have Dr. A. W. Nelson of New London exempted from the payment of dues hereafter. He is over seventy years of age, and is incapacitated from practicing any further; and it is the wish of the County Medical Society of New London that he be exempted.

DR. P. J. CASSIDY (Norwich): I second the motion.

THE PRESIDENT: Gentlemen, you have heard the motion; made and seconded. Are there any remarks upon it? All those in favor will signify by saying “aye”; contrary minded, “no.” The motion is carried.

There are three Committees that did not report this morning. Is it your pleasure that I call on them now? One was the Committee on a Sanitarium for the Nervous Poor.

DR. FRANK K. HALLOCK (Cromwell): Dr. Rienzi Robinson is the Chairman of that Committee. Of course, I do not know what has been going on, or what has been done by the Committee. It seems to me doubtful as to whether it is wise to continue this Committee, because the chances of getting a sanitarium for the nervous poor are quite remote. However, it seems to me that it is an institution that we ought to have in the State. If the Committee is continued, I would suggest that its title be changed to the Committee on a Sanitarium for the Nervous Poor and Psychopathic Hospitals. This question can hardly come up for action right now. Is there not some member of that Committee here to make a report?



Dr. WILLIAM H. CARMALT (New Haven): I think that it would be a mistake to abolish the Committee. The subject itself is sufficiently important to keep before the Society. If you dismiss the Committee, the thing falls to the ground; as it is the subject will be kept before us for some little time to come; otherwise, this important matter will simply be passed over.

THE PRESIDENT: I understand that the Committee will be continued, unless some action is taken to the contrary. I will next call for the report of the Committee on a State Farm for Inebriates, of which Dr. Frank H. Barnes is the Chairman.

Dr. FRANK H. BARNES (Stamford): *Mr. President and Gentlemen:* I wish to report that your Committee on a State Farm for Inebriates drafted a bill covering the proposition for the establishment of such an institution, and presented it to the Legislature, through your Committee on Public Policy and Legislation. I cannot remember the exact date of the hearing; but there was a hearing held; and we appeared before the Committee on Humane Institutions. We had a very good hearing and a large number of physicians were present, as delegates from the different county associations. There were also representatives of various charitable organizations, such as the State Temperance Society and the Confederation of Churches. It was my pleasure to conduct the hearing, and it was apparently a very successful one. There were two other bills besides ours presented: one, by Senator Frohlich; and another bill that I do not remember who presented. Anyway, there were three bills before the Committee; and they decided to have one hearing on the whole subject, and discuss the three bills at the same time.

There was not much said in favor of the other bills. Practically all that was said was said in favor of the bill of the Connecticut State Medical Society. Subsequently the matter was passed on by the Committee on Humane Institutions, and Senator Froelich's bill was accepted. As I understand it, this bill had some of the provisions of our bill, and, in fact, must have covered the subject very well; so they will recommend that a State Farm for Inebriates be established in our State. They changed the title, I believe, to a "State Farm"; as they did not

like the word "Inebriates" to appear in the title. The bill was then presented to the Committee on Appropriations, and they reported favorably to the amount of \$50,000. Therefore, I am very glad to be able to report to you that it looks as if our State Farm were an assured success. The matter still has to come up before the Senate; and the only thing that remains for us to do is to try to get every Senator and Representative to vote for the bill. I have spoken to several, and they are very favorable to it; and if all of us get busy, there is no doubt but what it will go through.

THE PRESIDENT: The next is the report of the Committee on Medical Inspection of Schools. Is that Committee prepared to report? (There was no answer.) Then, that brings us to Miscellaneous Business.

DR. W. L. HIGGINS (South Coventry): I do not think that I shall be able to meet with the House of Delegates to-morrow; so perhaps I had better bring us a certain matter. As a member of the Committee on the Epileptic Colony at Mansfield, for which we received, from the Legislature, an appropriation for new buildings, I want to say that we hope to have the institution open in a few weeks. Owing to the fact that some appropriations for some necessary things were overlooked in the hasty adjournment of the last session of the Legislature, we had no appropriations for laundry or laundry machinery, nor for some of the necessary furniture. Of course, you cannot start an institution without a laundry. We have not yet received the appropriation from this General Assembly. We were not able to break ground until June of last year. We had to develop water-supply and sewage-disposal plants, and to build a siding, a mile long, from the Mansfield station to the center of our property. We had to construct water-tight buildings, such as a kitchen, and all others that go to the starting of a large institution; and do everything else from the foundation up.

The Board of Trustees of the Epileptic Colony, soon after their appointment, selected a Superintendent. He was a man who had had sixteen years' experience in various institutions in New York, mostly in insane hospitals; but for five or six years

he had been at San Francisco, at the Epileptic Colony there. We thought it best to start with an experienced man; although the first thought of the Trustees had been that some young man, just starting, might take the position for a year, for his maintenance, and grow up with the institution. We had not studied the question, very long, before we found that we needed an experienced man, who would not make mistakes that would be expensive to rectify. We have had some criticism from the public press in regard to our having employed a superintendent before we had any patients. From what the reporters said, you would think we had committed an unpardonable sin, by doing so. In fact, a Senator said as much. But what did the Board of Directors do at the New Reformatory? They took Mr. Garvin from the State Prison, in order to have his advice from the start. That is the way all institutions are started, if they are started properly. Of course the Board of Trustees have felt the criticism somewhat; but we have not rushed into print, and we feel that we are subject more to the Connecticut State Medical Society than to any other body of men, because this is the association that was instrumental in getting the institution started. We know that we have the deep interest of this Association in our work.

We have an appropriation from this present session of the Legislature, and they have recommended that the sum of \$155,250 be given us. This is largely for the maintenance of eighty patients for the next two years, allowing us nothing for new buildings. Now it is the experience of all public institutions that it takes three years to get the patients into the buildings, after the appropriations have been received; because you have to get architects' plans and builders' bids, and this takes time. We frankly stated to the Legislature at the last session that there were thirty-five hundred epileptics in this State, and that probably not more than twenty per cent. of them would ever find their way into such an institution; and that, therefore, we felt that we must plan for a patient-population of six hundred, with the necessary attendants. That would mean appropriations of from six thousand to one million dollars, in order to develop

the plant properly, so that we could administer it in an economical way. There are certain general expenses in such an institution, which are practically as great with eighty patients as with six hundred. We have to pay the Superintendent, the farmer and other employees, the same as if there were more; so that the per capita cost will be high, if we are to have only eighty patients. We have asked for appropriations of sufficient size to enable us to take care of eighty more patients. We have nearly eighty formal applications for admission already; and, furthermore, Dr. Henry S. Noble of the Insane Hospital at Middletown says that there are fifty patients in that institution that are more epileptic than insane, and should be transferred to the Epileptic Colony. Dr. Hallock also has a number, and there are also some at the institution for the Feeble Minded. We do not want to take them from institutions where they are being cared for. Our first thought is for those who now have no place to go to; and it is a fact that if we get no appropriations for new buildings, the work will be retarded and no more patients can be received after our accommodations are taken up with the first eighty patients, until three years have passed. There will be an interval of three years in which we shall be practically at a standstill, and we are going to have the highest per capita cost for caring for these patients. In view of what I have said, and the Legislature not having yet closed its work, I think that it is possible to secure from the Legislative Committee a favorable report for a sum to provide for additional accommodation for patients.

Now here is a point that the Appropriations Committee should consider: We have but one boiler, one engine and one dynamo, for heating these buildings, furnishing steam for cooking and electricity for the lighting of the buildings. Those of you who have had any experience with machinery know, that, no matter whether the machinery is new or not, some accident may happen to it at any time. Supposing that one set should give out in the middle of the cold season of the year. Something will happen. We shall be criticised, and we hope it will not be the Board of Trustees that will get the blame. We want to have the influence of our State Society brought to bear on the Appropriation Com-

mittee, in order that they may see the matter in its true light. I do not know whether it is because the Board of Trustees has not presented the matter in the proper form, but at the hearing there were not present any more than four of the members of the Committee; and they were not continuously present. Besides, one of those that were present died and was buried the other day.

DR. WILLIAM H. CARMALT (New Haven): In consequence?

DR. W. L. HIGGINS (South Coventry): No; I think he was friendly to the institution, but his health was such that he could not give us much assistance.

Now I think the House of Delegates might pass a resolution something like this: That the Chairman of our Committee on Public Policy and Legislation be requested to take up this matter on behalf of the Connecticut State Medical Society, and see whether the Appropriation Committee will not do something for us. I think that Dr. McKnight is the Chairman of the Committee on Public Policy and Legislation, and I believe that he might have great influence in securing favorable action. Not only is he the Chairman of the Committee; he is also an ex-President of this Society. Furthermore, two of the Senators are Hartford men, Senators Hooker and Purcell; even if there is no public hearing granted, it would do a great deal of good to see these men. At our last meeting, we voted unanimously to instruct the Chairman to ask for another hearing. The Board of Trustees did not feel, at this meeting, that it was necessary to educate the Appropriation Committee up to the idea, or to go into the merits of this system of treating epilepsy, the desirability of an institution of this kind, and all that. We took it for granted that the policy of the State had been established, and that the thing to do was to go on and develop it. The State Board of Charities unanimously endorsed our position, and said that they were not prepared to ask for any new things, and were not going to endorse a State Farm for Inebriates. They thought that the Legislature should take care of the things already begun, like the Epileptic Colony.

If any of you wish to know more about what we purpose doing and what we are asking for, I shall be very glad to furnish

any information that I can. In view of what I have said, it would be well for any of you who are acquainted with members of the Appropriation Committee to see them in regard to the matter. I sometimes think that personal work with the individual members of the Committee accomplishes much more than does a public hearing.

I want to close by making a motion, unless some one else is ready to do so, or thinks of some better way of getting at it, that Dr. McKnight, the Chairman of the Committee on Public Policy and Legislation, be appointed a Committee of one to take the matter up and follow the interests of the Epileptic Colony, to the best of his ability, with the Legislative Committee.

DR. WILLIAM H. CARMALT (New Haven): If Dr. Higgins, who knows the Legislature better than I do, has any expectation of getting anything from the Committee on Appropriations, he is far more optimistic than I am. They might do something, of course; and I agree with what he says about the importance of getting a good Superintendent to start with, and the necessity of having the outfit properly made up from the beginning. I am, however, quite pessimistic about getting anything from the Appropriation Committee these days. They already have a bill in recommending the expenditure of thirteen to fourteen million dollars; and, as the grant is only for nine millions, they must cut down something. While I am willing to endorse Dr. Higgins' motion—

DR. HIGGINS (South Coventry): You will never get anything by not trying.

DR. WILLIAM H. CARMALT (New Haven): True; but my experience with the present Legislature has been most unfortunate in every respect. I shall have something else to say about this later. Would not Dr. Higgins himself be a better man to appear before the Committee, with the endorsement of the House of Delegates, than Dr. McKnight, who is pretty well overburdened with work? Dr. Higgins could speak from a personal knowledge of all the facts, and Dr. McKnight could not. I am not sure but that it would be better to have Dr. Higgins go before the Committee with the endorsement of this body.



DR. W. L. HIGGINS (South Coventry): Before Dr. Carmalt has a chance to make a substitute resolution or an amendment to my resolution, I would say that I have boned the Committee so much already that they are sick of seeing me; and a new man like Dr. McKnight, who might go personally to the Senators, would do more to get them interested in the matter than would any public hearing. I think that the House of Delegates would back up a resolution of this kind. We are all heartily in sympathy with the purposes of the Epileptic Colony, I am sure.

Another thing that I want to state is that the only legitimate reason that I have heard advanced for not giving any additional appropriation was that we had nothing in readiness for patients, and that they thought it would be some time before we would be in a condition to receive them; so that there would be plenty of time later to make such an appropriation, if necessary. They did not recognize the fact that when we open the institution, it will be cramped full; and that we have enough applications to twice fill it now. We have found that the experiences of other states in similar matters leads to the belief that we shall be cramped for room. We feel positive that the institution will be filled as soon as it is physically possible to make out application blanks, have the patients examined, and have them transported there.

The question was called for.

THE PRESIDENT: All those in favor of the motion of Dr. Higgins will signify by saying "aye"; contrary minded, "no." The motion is a vote.

DR. O. C. SMITH (Hartford): Dr. D. Chester Brown is with us now, and will make the report of the Delegates from the Connecticut State Medical Society to the meeting of the American Medical Association. This report, which was read by Dr. Brown, was as follows:



REPORT OF THE DELEGATES FROM THE CONNECT-  
ICUT STATE MEDICAL SOCIETY TO THE  
MEETING OF THE AMERICAN  
MEDICAL ASSOCIATION.

(Held at Atlantic City, June 3-6, 1912.)

*Mr. President and Gentlemen of the House of Delegates:*

The sixty-third annual session of the American Medical Association was not unlike many of its predecessors in many respects but the rapidity with which the meeting got under way showed that they were thoroughly determined that no time should be wasted where there was so much to be done and so little time in which to do it.

The plan of convening the House of Delegates on Monday was tried again in the hope that the work could be gotten so far along that the Delegates would be able to save out a day for attending some of the sections and the scientific exhibit, but it has been found that it simply resolves itself into giving the members of committees a little more time for their work and the House adjourns after the best of the literary and scientific work is over, too tired to attend any of the sections. The plan has worked out well, however, for more deliberate work in the various committees and councils, but has not given the members any more freedom.

It may be of interest to note that the attendance at this session was 3,598, while the average for the past ten years has been 3,456. The registration in the various sections showed that most of the sections had made slight gains over the average of the past ten years, but in Surgery, Obstetrics and Abdominal Surgery, and Dermatology, there were noticeable losses, while in the section on Preventive Medicine and Public Health there was the greatest proportionate gain. These *may* be straws, but then it is always possible that the wind will not blow.

In a previous report of your Delegates, reference has been made to the report of a Special Committee appointed by the House of Delegates to consider the question of Anesthesia. This Committee was continued and at the last session made its final

report, which should be carefully read by every practicing physician, and particularly by every Connecticut man, on account of the splendid work done by our own Dr. Yandell Henderson. The condemnation of chloroform; the explanation of the physiological action of carbon dioxide; the danger of repeating anesthesia within a short time; and finally their valuable deductions given at some length in their report in the Journal for June 15, 1912, furnish food for serious reflection to physician and surgeon alike. The House, appreciating the importance of the work, acted upon the recommendation of President Murphy and authorized the appointment of a committee of five to continue the investigation.

With so great a clinical teacher as Dr. John B. Murphy delivering a presidential address, it would seem strange if some recognition were not accorded the comparatively recent inauguration of the "Clinical Days." As a result of his recommendation, a favorable report was made to make such a Committee a permanent one, so that we may look forward to this practical feature as an additional attraction to our annual sessions.

In the Secretary's report is a very important suggestion relating to the deliberations of Reference Committees upon subjects of general interest. The position taken is that these matters are of interest to the entire membership and that a public hearing should be given, that any desiring to be heard on the question should have an opportunity. In some way this feature seems to have escaped the attention of the committee to which it was referred, but it unquestionably reflects the disposition of the House and no member of the Association need ever hesitate at the door of the House or feel that he will not be gladly heard in the deliberations of a Committee, on a question that he is interested in.

The Council on Medical Education made a final report on Classification of Medical Colleges and now declares itself ready to take up the classification of Hospitals. This question, involving the expenditure of money, was referred to the Board of Trustees, where it was left on adjournment, but is a matter that we may hear from in the near future.

Activity relating to the establishment of a Department of Public Health in the National Government has not ceased but the phrasing has changed a little as may be seen in this quotation from President Murphy's address: "That the Association reiterate its appeal for the enactment of legislation for the proper coördination of the public health activities of the national government in an independent public health service, along lines laid down in the Owen bill as reported by the Senate Committee on Public Health and National Quarantine, plus the amendment proposed by Senator Owen to maintain the status of the Public Health and Marine Hospital Service." The House finally adopted this report "together with a resolution that the President of the American Medical Association be empowered to reform the Committee in such a way as to increase its efficiency, taking from or adding to its membership as he may see fit; that this committee perfect such an organization as is best suited for its work and that the Board of Trustees be instructed to make the necessary appropriation of funds for its expenses."

One of your delegates, Dr. McKnight, was Chairman of the Committee on Awards for Scientific Exhibit, and if you could hear him describe these exhibits as he did to me when he had finished the consideration of them in committee inspection you certainly would not allow them to escape your notice at any meeting in the future. So impressed with the value of these exhibits was the House that a motion was carried that the Scientific Exhibit have first choice of location in Exhibition Hall.

In making this report, your delegates have not attempted to cover the work of the House, but to touch on *some* of the lines of active work that are still in progress, to stimulate your interest in the activities of this body and perhaps incline some of you to a more thorough perusal of the complete report which comes out in the Journal the week following the Annual Session.

Respectfully submitted,

D. C. BROWN,  
E. J. McKNIGHT.

It was moved and seconded that the report be accepted and be placed on file.

THE PRESIDENT: Are there any remarks? If not, all those in favor of accepting this report will signify by saying "aye"; contrary minded, "no." It is a vote.

There is a matter contained in the report of Dr. McKnight, as Chairman of the Committee on Public Policy and Legislation, that I wish to bring before you. The report contains some resolutions that he asks to have presented to the House of Delegates. The Secretary will read them.

THE SECRETARY: RESOLVED: That it is advisable, whenever possible, that the members of this Society adopt the so-called Leeds method of preliminary consultation by medical witnesses on both sides of the case as to its status.

RESOLVED, That it is the sense of this Society that it is inadvisable and objectionable for any of its members to occupy the position of Medical Advisory Counsel in open court, and at the same time to act as expert witness in a medico-legal case.

RESOLVED, That we regard the acceptance by a physician of a fee that is contingent upon the result of a medico-legal case as not in accordance with medical ethics and derogatory to the good repute of the profession.

THE PRESIDENT: Gentlemen, you have heard these resolutions. What is your pleasure?

THE PRESIDENT: These are the ones that Dr. McKnight wished brought up. It appears to be impossible to get good medical expert bills passed, and these resolutions are intended to bring about a similar result by our own action.

DR. WILLIAM H. CARMALT (New Haven): The question of expert testimony was brought up, Mr. President, as Dr. McKnight, there, has said. I want to speak about it simply on account of the disgust that I felt at the conduct of the Judiciary Committee. The bills that were brought in were presented by a Committee of the Bar Association of the State of Connecticut, after a conference with a committee from this State Society. Now these bills had been gone over with a great deal of care. The Committee of the Bar Association consisted of every State Attorney

in the State. Each county was represented, or practically so; and the bills were submitted to the Bar Association. The Committee then, after consultation with our Committee and with their own Association, formally drew up the bills and presented them to the Judiciary Committee, who treated them like so much waste paper, thrashing them around and having two or three shysters to talk against them. Indeed, they treated even the President of the Bar Association with absolute contempt.

It seems to me that it is useless for this Society to try to influence the Legislature of the State regarding the subject of expert testimony. What we can do ourselves is another question,—whether we can bring to bear on our own members moral force sufficient to prevent them from doing things that they have done in the past, is the question; and that is what Dr. McKnight's resolutions are intended to accomplish. Certainly the exhibitions made by members of the medical profession as expert witnesses are, to my mind, simply disgraceful. I have experienced it in more than one instance, where the medical man on the opposite side (if you choose to call it so) would whisper into the ears of the counsel in the court-room the questions that he was to ask, acting the part of an assistant counsel absolutely. That is practically what he was; and I think that such practices should be frowned on by the medical men of this State. If the Leeds resolution meets that need, I am perfectly willing to agree to it.

DR. J. FRANCIS CALEF (Middletown): Although not a delegate, the privilege of the floor has been granted to me for a few moments, for this reason: Twenty years ago, I was the Chairman of a medico-legal committee appointed by this Society to take up the subject under discussion, and we worked four years with the Bar Association. The man who was the President of the Bar Association at that time could not be converted to the views that the person who is now President of the Bar Association has been converted to. I think that a great gain has been made in that way. Although the President of the Bar Association then was a strong man intellectually, and a personal friend of my family, we could not make him take anything but

the view now held by the shyster lawyer—who takes his views, we understand, from personal motives. He wants to array one set of doctors against another set, and that is what he is continually doing. The counsel on one side gets his medical experts together, and states to them one side of the case. He thoroughly biases their minds toward his side, and is very clever about his statements. The medical men commit themselves, on that basis, to an opinion. Then they come into the court; and if they are present at the hearing of the other side of the case, their minds frequently become changed, after having heard both sides. The Leeds resolution will obviate that feature. Therefore, it seems to me, that it will put us medical men where we belong before the courts. If we have an agreement among ourselves to have a full, frank, and free consultation, with a thorough knowledge of all the facts, before we form an opinion, we can be at least as harmonious as the Supreme Court of the United States.

DR. FRANK K. HALLOCK (Cromwell): I wish to give you a word of comfort. I saw Mr. J. A. Wheeler, the Secretary of the State Bar Association, a few weeks ago; and he said that the State Bar Association was indignant at the way the members of the Committee were treated before the Judiciary Committee of the Legislature; and that they purposed to have a man to be constantly at the Capitol, in order to look after matters connected with the welfare of their Association and particularly the question of medical expert testimony. Therefore, I think that, if our Society will hold steady and stand ready to work with the Bar Association, we shall be able to get the laws we want on the Statute Books.

DR. CHARLES B. ALTON (Hartford): It may be in order to say that, some months ago, when I first knew that bills of this kind were to come up before the Legislature, I happened on a medical journal containing a well-written article, reviewing the laws of various states, or the laws presented for consideration in various states; and it gave, also, the results, failures in some instances, and successes in others. One thing dwelt upon was the objection of the legal profession to the passage of any law regarding expert testimony; but, more than that, the declaration of some



courts that these laws are unconstitutional. That always seems to be their resort when it has been impossible to defeat a law that has been presented by the medical profession. They go to work and have it declared unconstitutional. The laws in some states differ very materially from those in others; and the conclusion of the whole article was that it is almost impossible to pass, in any state, a law that will be acceptable, not only to the legal profession, but finally to the Court that will be called on as a last resort. I sent that article to Dr. McKnight. I do not presume that this may have influenced him in presenting this resolution; but I have no doubt but that in conference with the members of the Legislature, he found great difficulty in obtaining serious consideration for any law based on any of those presented in other states. Therefore, I feel inclined, in view of all the facts, to second Dr. McKnight's resolution; because I feel that it is, perhaps, the only thing that we can do at the present time. We have to begin in our own household to so educate the members of the profession that they will be able to bring about the best results, rather than to look for relief from the legal profession.

DR. OLIVER C. SMITH (Hartford): This resolution is not intended as a by-law, may I understand? and is simply an expression of sentiment on the part of those present. There can be no possible objection to our expressing ourselves in this way. I should like also to second the resolution. I had a feeling, in the early part of the movement, that some of the wording was unfortunate. For instance, "in this matter we hope to limit legislation and expense." Naturally, such an object as that could not be popular with the lawyers. We must put it on the ground that our motive is to have the matter arranged so that we may testify honestly and scientifically, and not give testimony that is bought and paid for. We should not put it to the lawyers that we wish to limit their practice and profit.

DR. WILLIAM H. CARMALT (New Haven): I think that this has got to be a moral influence brought to bear on the members of our profession in the State. We cannot do any more than that. I have put myself in very awkward positions after hearing



for the first time, testimony on the other side, that had been suppressed to me in my consultations with the lawyers. I don't know how this reform can be brought about. We cannot discipline a member of the State Society, can we?

DR. OLIVER C. SMITH (Hartford): Morally.

THE PRESIDENT: We can create a public sentiment in this body, which is a great force.

DR. WILLIAM H. CARMALT (New Haven): The guilty men are now dead.

THE PRESIDENT: All those in favor of adopting these resolutions suggested by Dr. McKnight, will say "aye"; contrary, "no." It is a vote. Is there any further business?

DR. P. J. CASSIDY (Norwich): Are there any other recommendations from any of the Special Committees?

THE PRESIDENT: I think that the Secretary has a matter that he has spoken of.

THE SECRETARY: It is in regard to this organization's having an official representation at the meeting of the International Medical Congress. It seems to me that it would be well for the Society to act on this matter. It might be well to have it so arranged that any member who applies may get the official credentials.

DR. WILLIAM H. CARMALT (New Haven): The International Medical Congress meets at London, in August; and several members are going, and might be Delegates of this Society. They will have a better position before the Congress, if they have that sort of recognition; and I move that the Secretary and President-elect be made a Committee to issue certificates as Delegates to those members of the Society who intend going to the Congress. Is there any definite number limitation?

THE SECRETARY: I have eight or nine names.

DR. WILLIAM H. CARMALT (New Haven): I meant, is the number of Delegates limited?

THE SECRETARY: There is no limit on the number of Delegates.

DR. WILLIAM H. CARMALT (New Haven): I will make that motion. (The motion was seconded.)

THE PRESIDENT: Is there any discussion? If not, all those in favor of the motion will signify by saying "aye"; contrary minded, "no." It is a vote. Is there any other business?

DR. WILLIAM H. CARMALT (New Haven): I made a recommendation in my report as Councilor from New Haven County that should be referred to the Committee on Public Policy and Legislation. That is the proper way to dispose of it, is it not?

THE PRESIDENT: I think so.

DR. WILLIAM H. CARMALT (New Haven): The recommendation was that the Chairman of that Committee should endeavor to obtain legislation that would compel physicians to register in whatever towns they happen to move to, the idea being that, as it is now, a County Clerk has no way of knowing what physicians are in his County. He simply gets this knowledge, if at all, by accident. If there were a bill for the registration of removals from one town to another, so that this information should be a matter of record in the Town Clerk's office, it would be a good thing; and I move that the Committee on Public Policy and Legislation take the matter up and endeavor to get such a law passed.

DR. P. J. CASSIDY (Norwich): I second that motion, and wish to speak in favor of it from a utilitarian point of view. It is very necessary that early registration be known, and that this early registration be in existence; because it is apparent that in some smaller towns, and some less densely populated counties, the men who are physicians, but are not licensed to practice in this State, have gone into various villages and have practiced, without any right or license to do so. The matter has not come to the attention of the medical authorities until these physicians have been working for years, in some cases, and for months in others. I have one case in mind now: that of a young man who moved to Jewett City, and was not licensed by the Examining Board of the Connecticut Medical Society: he practiced pretty nearly a year there, and even became the family physician of the County Health Officer, before the matter was finally discovered. If this resolution of Dr. Carmalt's had been in existence then, it would have been discovered earlier.

THE PRESIDENT: Are there any further remarks? If not, all those in favor will signify by saying "aye"; contrary minded, "no." It is a vote.

DR. P. J. CASSIDY (Norwich): I asked whether there were any other recommendations from Special Committees.

THE PRESIDENT: Not that we know of. Would it not be proper to set a time when we shall adjourn to? I think that there is no distinct time set.

DR. WILLIAM H. CARMALT (New Haven): I move that we adjourn now to meet to-morrow morning at 8.30.

The motion was seconded.

DR. O. C. SMITH (Hartford): We have never been able to get a quorum at that time. The Council might meet at 8.30 and the House of Delegates at 9 o'clock. We have tried it time and time again, and there was never a quorum at such an early hour. I should like to amend the motion in that way: that the Council meet at 8.30 and the House of Delegates at 9 o'clock.

DR. WILLIAM H. CARMALT (New Haven): I accept the amendment.

THE PRESIDENT: All those in favor of adjourning the House of Delegates till to-morrow morning at 9 o'clock will signify by saying "aye"; contrary minded, "no." It is a vote.

The motion has already been made to adjourn, and I declare this Session adjourned.

Adjourned at 6.05 P. M.

#### THURSDAY MORNING, MAY 22, 1913.

The meeting was called to order at 9.30 A. M., the President, Dr. Edward T. Bradstreet of Meriden, in the chair.

THE PRESIDENT: Please come to order, gentlemen. We will omit the reading of the minutes of yesterday's session, as it was impossible to transcribe the notes and get them in order; and as it was an adjourned meeting which was passed over.

The first business, as stated in the programme, will be the election of officers. How shall we proceed? That will be the first thing to take up. Shall we vote by ballot or *viva voce*?

A MEMBER: By ballot.

DR. O. C. SMITH (Hartford): The Board of Councilors presented the nominations yesterday. Shall we take them up separately? I move that they be taken up all together.

THE PRESIDENT: The Secretary will please give the list of nominations.

The Secretary read the names as presented at yesterday's session.

DR. O. C. SMITH (Hartford): The delegates to the various State Societies are usually not voted on. They are nominated by the Council, and are usually accepted without a formal ballot.

Those to be voted for are the President, two Vice Presidents, a Secretary, a Treasurer, a member of the Committee on Medical Examinations, eight members of the Committee on Public Policy and Legislation, two members of the Committee on Scientific Work and a member of the House of Delegates to the American Medical Association, besides the delegates to the state medical societies.

THE PRESIDENT: The Chair would entertain a motion that the Secretary be requested to cast a ballot for all the persons nominated by the Board of Councilors.

DR. GEORGE N. LAWSON (Middle Haddam): At our first meeting Dr. D. Chester Brown was nominated to succeed himself, but Dr. McKnight's name was read.

DR. O. C. SMITH (Hartford): We nominate for a year in advance, in order that the nominee may be known to the American Medical Association. If we waited till next year, his name would not be printed in the list of delegates. He is renominated now for next year.

THE PRESIDENT: Shall we proceed to ballot?

DR. WILLIAM H. CARMALT (New Haven): I would suggest that you call for other nominations. Although the Board of Councilors constitutes the Committee on Nominations, it is customary to allow the House of Delegates to nominate others, if they want to.

THE PRESIDENT: Are there any other nominations for these various offices? If not, shall we proceed to ballot?

DR. P. J. CASSIDY (Norwich): I move that the Secretary be requested to cast a ballot for the President, the Vice Presidents and the Treasurer; and that the President be requested to cast a ballot for the Secretary; also that the Secretary be instructed to cast a ballot for all the other nominees. (The motion was seconded.)

THE PRESIDENT: Are there any objections? If not, all those in favor please signify by saying "aye"; contrary minded, "no." The motion is carried. The Secretary will cast such a ballot, and the President has cast his. I declare these people elected.

DR. P. J. CASSIDY (Norwich): I move that an assistant to Dr. McKnight be nominated at this time—an assistant to Dr. McKnight, as Chairman of the Committee on Public Policy and Legislation. This is not an office, but merely an extra position, and the creation of this position is intended to allow Dr. McKnight to have the detail work of his committee done by some one else, who is connected with this Society and occupies a more or less official position.

DR. WILLIAM H. CARMALT (New Haven): I understand that Dr. McKnight requested it; did he not? (Dr. Cassidy's motion was seconded.)

DR. GEORGE N. LAWSON (Middle Haddam): I should like to ask whether Dr. McKnight has selected any one whom he would like to have occupy this position? It might be well for him to make his own selection.

DR. WILLIAM H. CARMALT (New Haven): Does he not wish to have Dr. A. M. Rowley of Hartford?

THE PRESIDENT: Dr. McKnight stated that Dr. Rowley had done a great deal of the clerical work for the past year. The motion is made and has been slightly changed. It now stands: Moved that Dr. Rowley be asked to assist Dr. McKnight in the detail work on the Committee on Public Policy and Legislation. All those in favor of the motion signify by saying "aye"; contrary minded, "no." It is a vote.

DR. O. C. SMITH (Hartford): I think that it might be well to say a word further regarding the Committee on Public Policy and Legislation. Dr. McKnight has been very modest in not

making any more expense than he could avoid in this work of the Committee, and the Board of Councilors feel that he should have a rather free hand in employing a secretary for doing the clerical work. There is a great deal of writing to be done, and correspondence. Plans are formulated for the work at the Capitol, and it takes a great deal of time. I think that if we, as the House of Delegates of the Connecticut State Medical Society, should express our appreciation of his work, and allow him to feel that any expense in the way of a stenographer and a clerk, which he may be put to, will be met by the Society, I should feel better about it. He will make no bad use of that liberty I am sure.

DR. CHARLES D. ALTON (Hartford): I should like to offer an amendment to Dr. Smith's motion, so as to include in it a vote of thanks to Dr. McKnight, who has taken a great deal of time from his professional work to give to the business of the Society. I often call up his office, and find that he is at the Capitol. I feel that we owe him much for his work there, and I wish to amend Dr. Smith's motion by including in it a vote of thanks to Dr. McKnight.

DR. O. C. SMITH (Hartford): My suggestion was not in the form of a motion. Perhaps some one will put it in that form and accept the amendment.

DR. CHARLES N. LAWSON (Middle Haddam): I will make it as a motion—Dr. Smith's suggestion with Dr. Alton's amendment—let the President or the Secretary put it in the proper form.

THE PRESIDENT: I will ask Dr. Smith to formulate his remarks into a motion.

DR. O. C. SMITH (Hartford): Resolved, that the House of Delegates, assembled at Hartford, May 22d, 1913, wish to extend a vote of thanks to Dr. Everett J. McKnight, Chairman of the Committee on Public Policy and Legislation, for his untiring efforts in accomplishing work for the Society in this capacity; and we desire that in future he feel at liberty to employ such assistance in the work as he may need, at our expense. (The resolution was seconded.)



THE PRESIDENT: Will you remark further, gentlemen? If not, those in favor of this resolution will signify it by saying "aye"; contrary minded, "no." It is a vote.

Was there any report on the Gurdon W. Russell Fund?

DR. WILLIAM H. CARMALT (New Haven): The Board of Councilors passed a resolution that the income from this fund be allowed to accumulate and be added to the principal.

THE PRESIDENT: Does that require any action by the House of Delegates?

DR. WILLIAM H. CARMALT (New Haven): No; it will go on without any action.

THE PRESIDENT: Is the Committee on the Medical Inspection of Schools ready to report this morning? (There was no answer.) The matter of a Committee to confer with the Governor in regard to appointments to the State Board of Health ought to be considered.

DR. O. C. SMITH (Hartford): The Board of Councilors, at the meeting last year, appointed a Committee to confer with the Governor as to the appointees on the State Board of Health. It might be well to have the Councilors' action considered by the House of Delegates. I will make such a motion, as Chairman of the Council.

THE PRESIDENT: Are the Board of Councilors prepared to recommend the Committee?

DR. O. C. SMITH (Hartford): Yes.

THE PRESIDENT: Will you make a motion that the House of Delegates appoint such a Committee?

DR. O. C. SMITH (Hartford): If the motion had better come from me, yes.

THE PRESIDENT: How shall the Secretary word the motion? I understood that the Board of Councilors had a Committee to take charge of this matter.

DR. O. C. SMITH (Hartford): The Committee recommended was Dr. Carmalt, Dr. Hallock, and the President-elect.

THE PRESIDENT: Is a motion made by you that such a Committee be appointed for the ensuing year?

DR. O. C. SMITH (Hartford): Yes, if it is proper for me to do it.



THE PRESIDENT: Is this motion seconded? (It was seconded.) The motion is made and seconded that the Chair appoint a Committee to confer with the Governor regarding appointees on the State Board of Health. Are there any remarks on this motion?

DR. GUSTAVUS ELIOT (New Haven): I should like to know whether the Governor desires to have such a conference.

THE PRESIDENT: Can any one inform Dr. Eliot?

DR. O. C. SMITH (Hartford): I am not aware that he has expressed such a desire.

THE PRESIDENT: Are there any further remarks? If not, all those in favor of the motion signify by saying "aye"; contrary minded, "no." It is a vote.

THE SECRETARY: The Council this morning recommended to the House of Delegates that the resolutions introduced yesterday by Dr. McKnight, concerning the Leeds method of reaching a decision in medico-legal cases, be favorably acted upon, and that these resolutions, of which there were three, be sent by the Secretary of the State Society to the Secretaries of the several County Medical Societies.

DR. WILLIAM H. CARMALT (New Haven): That motion was for this House of Delegates to endorse the report of the Chairman of the Committee on Public Policy and Legislation, and that the matters included in the three resolutions contained in his report be sent by the Secretary of this Society to the different Secretaries of the County Societies. We want the endorsement of this body before they are sent; that is the point.

THE PRESIDENT: Is the motion seconded that our Secretary send to the various secretaries of the County Associations the resolutions that we passed yesterday afternoon, regarding the Leeds method of conducting expert testimony, etc.? (The motion was seconded.)

DR. GEORGE N. LAWSON (Middle Haddam): I should like to add to the motion, "With the request that the County Societies take action on it." (The amendment was accepted.) Was the motion seconded? (It was.)

THE PRESIDENT: All those in favor of the motion as it now stands please signify by saying "aye"; contrary minded, "no." It is a vote.

DR. O. C. SMITH (Hartford): The question of dues for the ensuing year is usually taken up at this time. Will the Secretary please read the recommendation of the Board of Councilors with regard to this.

THE SECRETARY: The following motion was passed by the Board of Councilors: "That it be recommended to the House of Delegates that the dues for the ensuing year be reduced one dollar." (It was moved and seconded that the recommendation of the Board of Councilors be followed.)

THE PRESIDENT: It has been moved and seconded that the dues for the ensuing year be reduced one dollar. Are there any remarks on that motion? If not, all those in favor signify by saying "aye"; contrary minded, "no." It is a vote.

DR. O. C. SMITH (Hartford): As Chairman of the Council, I should like to say that the recommendation was made because of requests from a number of County Societies, through the County Secretary or the Councilor, that this action be taken. Now that the publication of the *Yale Medical Journal* has been suspended the expense that the Society is under has been reduced. The dues were increased a few years ago in order to meet that extra expense, so it seems fair that they should be reduced.

DR. GUSTAVUS ELIOT (New Haven): I should like to know whether the Society could not be run on two dollars?

DR. O. C. SMITH (Hartford): That would be sailing pretty close to the wind. We have only two hundred dollars in the treasury now; and it has seemed to us after careful deliberation, that a reduction of one dollar, giving the State three dollars and the County one dollar, would be a fair adjustment. That is what the dues were before they were raised to meet the expense of the *Yale Medical Journal*.

THE PRESIDENT: There was also a motion made by the Board of Councilors regarding the appointment of a committee to investigate the expense of publishing another journal.

THE SECRETARY: The Council, at its meeting this morning, recommended to the House of Delegates that a Committee be appointed to investigate the cost of a journal or quarterly, to be published under the auspices of the State Society. They also recommended that this Committee be composed of three members: Dr. Walter R. Steiner, Dr. Frederick B. Willard and the Secretary of this Society.

DR. WILLIAM H. CARMALT (New Haven): That Committee to report a plan at the meeting next year.

DR O. C. SMITH (Hartford): It has seemed to the Board of Councilors that the giving up of the *Yale Medical Journal*, which takes away the only medium that the Society has for the publication of its Proceedings, other papers of its members and Hospital reports, is an unfortunate occurrence. As practically all State Medical Societies now have some such publication, it seemed desirable that the Connecticut Society should have one. This matter was investigated by the House of Delegates, at the request of the Board of Councilors, last year; and, after having heard Dr. Willard's report in regard to the matter, it seemed possible that this might be accomplished. A quarterly, modestly printed, containing county papers and other matters of interest in the State, would place the work done by our members on record. Dr. Willard's report made it appear that this could be done at a small expense, when advertisements were considered. I think it proper that we should have such a publication, if it can be had without a tax on the members. The source of income would be the subscriptions of the members of the Society and the advertisements.

DR. CHARLES D. ALTON (Hartford): The Hartford City Medical Society has already taken that line, and a Committee has been appointed to consider the matter of publication. Dr. Steiner is on this Committee; and it is not improbable that if such a Committee were appointed by the State Society, the whole subject might be taken up together. Then such a journal, if published, might serve both purposes.

THE PRESIDENT: The motion has been made and seconded that a Committee consisting of Dr. Steiner, Dr. Willard and Dr.

Scarborough, be appointed to consider the feasibility and advisability of publishing such a journal, and bringing in a report next year. Are there any remarks? If not, those in favor signify by saying "aye"; contrary minded, "no." It is a vote.

DR. O. C. SMITH (Hartford): As Dr. McKnight has come in I should like to have the resolution passed a few moments ago read.

THE SECRETARY: "*Resolved*, That the House of Delegates, assembled at Hartford, May 22, 1913, wish to extend a vote of thanks to Dr. Everett J. McKnight, Chairman of the Committee on Public Policy and Legislation, for his untiring efforts in accomplishing work for the Society in this capacity; and we desire that in the future he feel at liberty to employ such assistance in the work as he may need, at our expense."

DR. O. C. SMITH (Hartford): In addition a resolution was passed in the Board of Councilors to appoint an assistant to Dr. McKnight and the name of Dr. A. M. Rowley of Hartford was suggested.

THE PRESIDENT: The Chairman of the Committee on Public Policy and Legislation has a report to make on a matter referred to him yesterday afternoon.

DR. E. J. MCKNIGHT (Hartford): This communication from Dr. Kate C. Mead was read yesterday, and referred to me. There is a Committee of the American Medical Association called the Committee for the Public Health Education of Women. They have done a great deal of work throughout the Union. That fact should be recognized, and the work taken over by the State Society. The report of the Committee two years ago covered several pages, and showed the work done in the different States. Just what Committee that work should come under, I do not know. The Committee on Public Policy and Legislation has no powers in regard to Health. We have no Committee of the State Society covering that work. I would say that in the National Legislative Council Meetings and those of the American Medical Association, I became thoroughly convinced that the people of Connecticut are already better informed regarding these matters than those of any other State in the land. I do not

see the necessity for any extensive public work in this line, such as there is in many other States; but it might be a good thing to stir up Bridgeport and Waterbury. I think that some one should move that that be made a Committee of this Association. I do not know just how this could be done, whether they should be under the Council or the Committee on Public Policy and Legislation. The Connecticut members of the Committee for the Public Health Education of Women give talks, lectures, etc., in different parts of the State, and are doing a work that it would be well for this Society to take up. We might establish a Committee on Health and Public Instruction.

DR. CHARLES D. ALTON (Hartford): I should like to ask Dr. McKnight a question, to see whether he can give me some information. Did I understand this correctly? I think Dr. Mead said that if the State Society took over the matter, the American Medical Association would contribute some funds to support the work, so that the expense would be partly borne by that organization.

DR. E. J. MCKNIGHT (Hartford): It would come under the Committee on Health and Public Instruction. Dr. Walter B. Cannon of Boston, Dr. J. M. McCormack of Bowling Green, Dr. H. M. Bracken of Minneapolis, Dr. W. C. Woodward of Washington, D. C., Dr. Frederick R. Green of Chicago, and Dr. Henry B. Favill of Chicago are members of that Committee.

THE PRESIDENT: Will Dr. McKnight make a recommendation regarding the size of the Committee, etc? Are you prepared with a recommendation, Dr. McKnight?

DR. E. J. MCKNIGHT (Hartford): It is a question as to whether there should be one member from each County or not. That would make a very large committee.

DR. GEORGE N. LAWSON (Middle Haddam): I would suggest that as Dr. Mead has already done a large amount of work, especially in her own County, and is very enthusiastic about it, it might be well to put her name on such a Committee.

DR. GUSTAVUS ELIOT (New Haven): I think this is a pretty important matter to decide off hand, and I move that it be referred to the Council with power to act. (The motion was seconded.)

THE PRESIDENT: Will you remark on this motion? If not, all those in favor of it will signify by saying "aye"; contrary minded, "no." The motion is carried.

DR. E. J. MCKNIGHT (Hartford): Will the Council have power to establish a Committee? Is power given them to do so by that motion?

THE PRESIDENT: Yes; the motion gives them that power.

DR. WILLIAM H. CARMALT (New Haven): Is there any other business?

THE PRESIDENT: I understand that it is customary to have a motion that the reports made by the various Committees and Delegates to the House of Delegates be accepted and adopted.

DR. CHARLES D. ALTON (Hartford): I will make that a motion. (The motion was seconded.)

THE PRESIDENT: The motion has been made and seconded. Are there any remarks? If not, all those in favor of it will signify by saying "aye"; contrary minded, "no." It is a vote.

DR. WILLIAM H. CARMALT (New Haven): I want it put on record from this House of Delegates, and again from the Society, our disapproval (and, if you choose, any stronger word) of the action of the State Board of Health in refusing to act upon, and in ignoring the recommendation of this Society regarding the license of that midwife, Ginsburg, to practise. It was brought before us by the Committee on Public Policy and Legislation, and we were told that the Board had endorsed their old action, in spite of what we had said. This Society does not purpose to be told by the State Board of Health what is good policy, and it certainly is not good policy to recommend as a midwife a woman convicted of felony and repeatedly caught in practising illegally; and I think that we should express our disapproval of the action of the State Board of Health.

THE PRESIDENT: Is it the sense of the meeting that Dr. Carmalt's expression regarding the matter is sufficient, or will you put it into the form of a motion? What is your feeling in the matter?

DR. CHARLES B. ALTON (Hartford): Is Dr. Carmalt prepared to put it in the form of a motion?



DR. WILLIAM H. CARMALT (New Haven): I expressed my own feeling, and perhaps that of other men. I should not be sorry to have the Secretary write to the State Board.

THE PRESIDENT: Unless the motion is made, the President will consider that this expression of opinion is the prevailing one.

A MEMBER: Cannot it go on record without a motion?

THE PRESIDENT: Will some one make a motion? I think that things go on record in our Proceedings that are not motions. For instance, the discussions go in. Will some one make a motion? If not, we will proceed to the next business.

A MEMBER: I move that this be made a motion, and that Dr. Carmalt's remarks be accepted as a motion.

DR. WILLIAM H. CARMALT (New Haven): I second that motion.

THE PRESIDENT: Are there any remarks?

DR. GUSTAVUS ELIOT (New Haven): May we have Dr. Carmalt's remarks read?

DR. BRADSTREET: I will ask our stenographer to read them. (Miss Gay read Dr. Carmalt's remarks.)

DR. WILLIAM H. CARMALT (New Haven): I think that the Secretary can lick that into better shape.

THE PRESIDENT: Is it your wish to vote on this motion?

DR. GUSTAVUS ELIOT (New Haven): It might be well to put it into shape before we adopt it. I asked to have it read in order to bring out whether it included sending an account of our vote to the State Board of Health.

THE PRESIDENT: Are you ready for the question? All those in favor will say "aye"; contrary minded, "no."

DR. GUSTAVUS ELIOT (New Haven): Not as read; no.

THE PRESIDENT: The motion, in my opinion, is carried.

DR. P. J. CASSIDY (Norwich): If there is no further business, I move that we adjourn to May 20, 1914, in New Haven.

DR. CHARLES B. ALTON (Hartford): Before that motion is put, I would draw attention to a list of new members read by the Secretary yesterday. There is a misunderstanding regarding the last name on the list read, through a clerical error. The County



Secretary copied from the wrong list, and put in the name of Dr. Greenburg. I move that that name be omitted from the list, as not read.

THE PRESIDENT: All those in favor will say "aye"; contrary minded, "no." It will be erased.

I declare this meeting adjourned.

Adjourned at 10.15 A. M.

## The Banquet.

The annual banquet was held at the Hartford Club, on Thursday evening, May 22d, at 7 o'clock. About one hundred and fifty members of the Society were present. Dr. Everett J. McKnight acted as toastmaster. The following were the speakers:

JUDGE WILLIAM S. CASE  
REV. ERNEST DEF. MIEL  
EDWARD T. BRADSTREET



PRESIDENT'S ADDRESS.



## President's Address.

### Some Qualities of Human Nature as Affecting Progress.

EDWARD T. BRADSTREET, M.D., MERIDEN.

It needs no statistical gauge nor historical log-line to make evident the fact that the human race is making more rapid progress toward better things than ever before. Marvelous scientific advances during the last sixty years have changed the routine of our daily lives so completely that all human endeavor has received greater impetus and finds expression in a greatly increased number of channels. The resulting unrest has led to impatience, and an intemperate zeal for short cuts and long jumps towards the goal that will surely be attained. It is with no purpose of lamentation, but quite the opposite, that I wish to speak on "Some Qualities of Human Nature as Affecting Progress."

In much of the turmoil that continually disturbs us and prods us on, some of the essential and eternal qualities of human nature seem often to be ignored, or under-weighed. The old stoic, whose life was being crushed out by a stone that had fallen on him, took pleasure in thinking that he knew what was killing him, while the stone did not. We shall not uncover much aid in this discussion, but it may be gratifying to consider what is holding us down.

The air is full of schemes and legislation; propagandists abound; reform clubs multiply; everything from kindergartens to old people's homes are being placed under advanced methods, and we are all under wholesale study and discussion. But the human unit cannot be treated just like other units, and, therefore, our sociological problems are hard indeed. But facts can be affirmed of human nature as of everything else. To all

things with which we have to do we ascribe qualities and tendencies, and by these we recognize their nature. Chemists expect a constant behavior on the part of the matter with which they deal. Animals are endowed with certain characteristics, individually and collectively, and we concede these to constitute their nature. When man arrived, he was given certain qualities and tendencies, and man has his nature. This seems axiomatic, but is not duly considered in our efforts to advance. The endowment of free will—the power to choose—the octaves we can run in the scale of our living—the range from the “brother of the ox” to the poet, so misleads us that we are apt to overlook the fact that we are animals, and that as long as we are in the flesh we must be animals. The laws of our nature are unchangeable and necessarily as unchangeable as are those of anything else in nature. Repression is not change. In the evolution of society so many concessions have been made that the unthinking often assume that tendencies and qualities that are for the most part held in abeyance, have been obliterated, or can be ignored. We have gained so much; we have come up from such darkness to so great a light that we are in danger of acting like one dazzled. Man is not only an animal, but he is selfish. He must be—God in his wisdom made him so. Instead of denying this or ignoring it, we should rejoice in the fact, for in that quality lies our hope.

Egoism or individualism sounds better than selfishness, and therefore, when we speak of ourselves, or of our kind, we call it egoism. Others are selfish. Egoism is necessary and needs no apology. We talk of altruism and praise sacrifice, but as scientific, and therefore truthful, men we should admit “that being finite beings we cannot know pure benevolence.” In all the affairs of men from religion down to politics, egoism is the mainspring and rules the day, whether we like it or not. That religion which offers the most has the largest following. When any religious sect ceases to supply a real want, its growth is checked. It is interesting to note the falling off in attendance at those churches where the fear of hell-fire has ceased and insurance is not sought, and the rapid growth of that excruciat-



ingly named Christian Science, which offers freedom from pain and disease, and which interprets death itself as almost unnecessary. And in politics, the party established in power proves its incapacity to do away with the necessity of work and other laws of the universe and is replaced by another that promises to correct all existing evil. Surely egoism, the desire to better one's condition and seize happiness, rules the world. This subject, as wide as the world and as long as history, must be used for very limited fields. I wish to speak of human nature as affecting the physician himself, organized charities and some other things.

In the wonderful development of our art that has brought us up on to such high ground that our horizon has been extended so that one's eyes cannot measure the vista, and one's mind dare not try to grasp the possibilities of our successors, one question frequently arises—Will the general practitioner last out? The present tendencies are pushing him to the wall. His voice is seldom heard in debate. He apologizes. He has come up to the high places; is taking a look at the promised land and feels himself "ripe for his epitaph." And this is due to the working out of this innate quality, egoism. The desire to develop, to better one's condition, naturally leads one into the work he can do the best and which brings the greatest rewards. The artist, starting with a world full of beautiful things to paint, finds a demand for a certain kind of his pictures, and, therefore, we have artists who paint nothing but sheep, others cattle and others beautiful forms and faces. They follow the demand—and the reward.

Now it is easy to say nice things of the old family physician—so it is of agriculture. It is rather nice to sit in a well-appointed library and write of the glorious work of the good old doctor, and of the free and open life of the farmer. In living the parts, some of the romance is not felt. It is the boast of our profession that it is the most altruistic, and as the greatest development of the individual comes by working for the good of others, egoism by altruism, it must be that our profession will go on to greater and greater honor.

But the rewards of the general practitioner are largely derived from his inner consciousness; are intangible and not a medium of exchange. They are more satisfactory to himself than his family. The larger fees and the limited hours of the specialist attract. It is inevitable at the present rate of recompense that, following a law as potent as the law of gravitation, the best fitted and most ambitious, and therefore most worthy young men will select a specialty, and the indifferent or more poorly equipped will skirmish along the whole line of medical practice. I need not interpolate that there are exceptions to this as to all general statements. It would be easy for me to speak of the delights of general practice, and from a heart full of tender memories, of intimate friendships, trust and gratitude, I can truthfully say, I would not exchange my retrospect for that of famous men. But this pleasure comes late and does not appeal to the eager-hearted. But I am sure that by and by, it may be in twenty years, or it may be in more or less, the general practitioner will again come to his own. It is inevitable that specialism will increase. The more specialists there are, the more need there is for a family medical adviser; one who can be called a *friend*. Commercialism will arise. I hear now and then that it is already here. It has no place in our inheritance. Inasmuch as the individual reaches his greatest development and happiness by working for the greatest good, a higher selfishness, egoism by altruism, there will soon be reached a limit to over-specialism. A merciful Providence will protect his suffering children and there will be developed a sufficient number of highly-trained and logical general practitioners, who will use many refined aids to diagnosis, but who will still have to depend on worthy specialists, who have survived the flood, for the most intricate and technical work. And these general practitioners will receive attractive and fitting reward for their services *only* because their services will be worth more.

In our efforts to work for the good of others; in our pursuit of happiness by following along altruistic lines, we have gone far. We have hospitals near every community except the smallest. We have a number of organizations involving medi-

cal supervision or attendance. Organized Charities are the boast of Christian countries. This boast is not always well-grounded. A large charity may, on analysis, be an apology—an evasion of duty—an easiest way. It may be a conservator of time and a preventive of unpleasant emotions. A visiting nurse may be delegated to those who are sick or in prison, and the cup of cold water be given from a distance. Many a charity that is launched on a community or on our State depends on medical men for its administration or for counsel. In our zeal, we must be careful not to repress or stifle the God-given principle of growth and self-help in those we aid. It is largely for us to see to it that the recipients of our charities do not get a blow on the head of their egoism. Aid and charity should be handed out and not down. No one gets so low that all pride is gone, and it is often our duty to liven up a small spark of self-respect. There is danger in our present-day, wholesale benevolence of the loss of that personal element that goes so far in any kindly deed. One, in an institution so large and splendidly managed that its affairs run on silent wheels, is apt to lose his identity and sink into the carelessness of obscurity. He feels as if he were known only by number or as a case. His egoism is crushed and his pride benumbed. A few years ago, an old gentleman was in a hospital waiting for death that he knew was not far off. One day he asked me if I couldn't hurry him off. I asked him if he didn't like to look out of the windows and see the blue sky and the green leaves of the trees blown by the wind. "I wouldn't give a sixpence for it," he said. But after I mentioned how much good he had done for the fellow in the next bed, and how much he might do for the next one to occupy it, and how much he could help the nurses by showing an appreciation of their kind ministrations, he took a brace that apparently helped him through his remaining weeks. It is in human nature to get all we can out of our fellow men. Some of us have learned that we get more out of them by helping them and giving to them than in any other way. But all have not yet learned that way to happiness. Not only does the daughter of the horse-leech cry, "Give! Give!"; it is

the universal cry of mankind. From the baby reaching for its mother's breast to the old man with muscles again incoördinated, reaching in the darkness of approaching night for the Light of an Eternal Day, we are saying, "Give! Give!" Those who are in a position to give should show some of the care of a wise parent in giving. "The quality of mercy is not strained but falleth like the gentle rain from heaven." This does not mean a spring freshet.

In no other discussion is the unchangeable and necessary make-up of human nature more often overlooked than that regarding the social evil. This branch of a very large subject is in itself too large for satisfactory treatment at this time. All I wish to say is along the line of recognizing human nature as it was created and as it must be. With the inherent and necessary tendency of man to better his condition, to get and to acquire, always reaching out to grasp what he thinks he may want, it was necessary to implant deeply in him a desire that would at times dominate him, and cause him to perpetuate his race even to his own selfish disadvantage; a desire so strong that for the time would lead him to cast prudence to the winds and place him under obligations that in his more frequent moods he would be unwilling to assume. Had sexual desire been made less imperative, many of us would never have been born. The best boon granted to humanity is maternal and paternal love. This love leads us to our greatest happiness on earth and even permits us to interpret, more than in any other way, God Himself. But as a general rule, large families are not the result of prayer. Strong currents of rivers, electricity and of human feeling have to be diverted from their most easy way, if they are diverted, with great wisdom. They may be blocked, but they have to go somewhere. To meddle with human nature, to become "deputies of Providence," requires wisdom. From much of what we read, it would seem that there are many well-meaning, but not very vigorous people, who think that to correct this monstrous menace to society, all that is necessary is to gather the young about the knees of the experienced and teach them physiology and the germ theory of disease. If

knowledge were a remedy, this form of vice would long ago have been driven to a corner. Search for classical lesions in the past history of his patients will not cease as soon as the diagnostician of the future learns that his patient studied physiology and sex-hygiene when young. A few doctors become slaves to morphine, and a few still take drinks that are said to be depressants even though they seem temporarily to be wonderfully adapted to present need. Knowledge is a poor anchor in situations of great stress. I fear I am a little lonesome in my belief, but I do believe, that the bloom of innocence is a better protection against falling into the pool of our social evil than the shell of any fruit that grows on the tree of knowledge. I protest against stimulating that curiosity and craving for experience that are the cause of the sexual downfall of many a boy and girl. Wonder is better than curiosity. Stories of wicked giants and beneficent fairies are better for them than physiology. It seems abominable to anticipate the holy teachings of marriage and the wonderful discoveries of perfected union by talks on sex hygiene to our children. There are some things that science and reform should approach with unshod feet. Let some ground remain holy. Let us wait until we have pushed the curtain further back before we let everybody in behind the scenes. For our children and for our present purpose let us be content with the old statement, "male and female created He them."

#### IN CONCLUSION.

Man was given a nature that makes him selfish, that makes him preserve himself, and this in turn leads him to grow and develop himself, seek the greatest good for himself, and this he finds he can do better if he seeks ways that benefit others. His egoism grows faster if he becomes altruistic, and the more altruistic he becomes, the more is he admired and followed. Impostors note his methods but failing in motive soon fall by the way. Altruism may become excessive and charities be unwisely undertaken or carelessly administered. Mercy and justice must each be considered. Man's early command to

multiply will be obeyed because of an inherent quality that becomes a dominant passion, and this dominant passion often turns to vice. Reform is rampant and the world is almost writhing in labor to bring forth millennial conditions. Science and philosophy are in a race for the goal. Religion, weighed down by the past, or tied like Gulliver, by little ropes of man's twisting, seemingly lags. Our flounderings and zigzag progress prove an irregular following of a real leader. From the beginning of the records of our race, there is evidence that since his creation man has shown a spiritual quality, and this through all history has been demonstrated to be able to dominate all other qualities. Over 1900 years ago, a leader appeared who showed the way. His leadership has been followed enough to prove His worth, but how utterly we have failed of our possibilities! Poor human nature, asserting itself now in one direction and now in another, mistakes its own impulses for guides.

Man, by nature, is devout; and not until that spiritual quality, the constant recognition of a Higher Power, and an Infinite Good, dominates us and controls us, shall we reach the good we seek. Tolstoi, in his last message, said: "The hope of the race lies in the improvement of the individual." Nothing will hold a man except self-control and nothing can dominate a man, so that all his efforts will be in the right direction, but a true and a real religion. What we must teach ourselves and our children is self-control; what we need for a sure and steady progress is to return to the old truth: "Seek ye first the Kingdom of God and His righteousness and all these things will be added unto you."

PAPERS ON SPECIAL  
SUBJECTS





## The Question of Balance.

ANSEL G. COOK, M.D., HARTFORD.

Orthopedic surgery is the broadest specialty in the world; so broad that some people do not even consider it a specialty. There are practitioners, a small number, who regard the orthopedist as the most useful man in the community, while certain others regard him as an unmitigated nuisance. He makes shoes and braces, and yet he is not a mechanic; he performs surgical operations and yet he is not a surgeon; he prescribes medicines and yet he is not a physician; he talks more or less learnedly about pathology and yet he is not a pathologist; he is eternally butting in and mixing himself up with all the regular cut and dried specialties, and yet he is not an accredited member of any of them. He is apparently a medical Jack-of-all-trades, but with this difference; Jack is willing to take orders and do as he is told and is a useful member of society, while the orthopedist always maintains opinions of his own and invariably shows a strong disposition to do what he considers his own work, himself, and in his own way.

Question. How did he come to be what he is, why is he endured, and what does he do to justify his existence? Let me try to answer. Endeavor to preserve an unprejudiced mind and listen to his side of the story.

The orthopedic surgeon of to-day is the logical successor of the natural bone-setter of yesterday. The late Hugh Owen Thomas of Liverpool, England, was not a fellow of the Royal College of Surgeons, but you all know who and what he was. The modern orthopedist has equipped himself with a medical education and is therefore tolerated by the medical profession. The natural bone-setter of yesterday had no professional standing and survived only because he did, and the community recognized that he did, things that the community wanted done;

things that the regular practitioners either could not, would not, or at all events, did not do. The relative proportion of bone-setters to the rest of the profession has never been large, and probably never will be. The work requires a certain amount of mechanical skill, is distasteful to most practitioners, and is comparatively unremunerative.

General surgeons and general practitioners desiring to retain entire control of their patients have repeatedly sought to eliminate the bone-setter, by forming alliances with blacksmiths, instrument-makers, corsetieres, etc., or have taken to prescribing ready-made apparatus, and to using ready-made splints. On the whole, this arrangement has not proved satisfactory. There was no lack of ability on the part of the surgeon. The bone was set or the operation done with skill, but the tedious drudgery of the after-treatment bothered him. He disliked to fuss with braces, fit shoes and bandage with plaster of Paris. He was busy, his mind was on other things, and he was sorely tempted to give the after-treatment of the fracture to the junior house surgeon, to send the club-foot to an instrument-maker with orders to fit a brace, and to turn the spinal curvature over to the ministrations of a plausible young woman who had assured him that she was a graduate of something or other and could cure curvature of the spine by a highly scientific combination of massage, electricity, and gymnastic exercises. All of these people acted under doctors' orders, none of them took any responsibility, and when the case ended in disaster, the doctor who recommended them was invariably held accountable for whatever they did or did not do and his reputation suffered accordingly.

Men seldom seek to become orthopedic surgeons of their own accord; they develop an aptitude for the work, and it is thrust upon them until everything else is crowded out.

The bone-setter is not even allowed to choose his own work or set his own limitations. All this is done for him very specifically and very definitely, by the laity. If he is a bone-setter, he must do bone-setting in all its branches, including broken bones, all troubles with bones or joints, muscles or

tendons, any deformity, lack of symmetry or impairment of function of legs, arms, hands, feet, head, neck, back, or any outside part of the human body, and any kind of lameness. All this absolutely without regard to cause. The laity do not discriminate, they know nothing and care less about cause. What they want is results—*cures*.

Now if the ankle turns and drags, the cause may be congenital club-foot, cerebral paralysis, foreign body (bullet or needle) in the ankle joint, ant. polio. myel., locomotor ataxia, tubercular bone disease, gonorrhea, any kind of infection, rickets, Pott's fracture or other trauma, flat-foot, neuritis, or neurosis, etc., etc. The ankle is brought to the bone-setter to cure, because other bone-setters have cured other ankles that turned and dragged, and he must therefore cure this one. If an operation is required, he must do it; if a brace or shoe is needed, he must furnish them. So much for the conditions under which he lives and serves. After all, you may say, the bone-setter is only a general practitioner who declines to take baby cases, or to treat fevers and general diseases, except in so far as they or their sequelæ affect locomotion.

Now let us try to get his viewpoint and to see with his eyes how he sizes up the situation; and this brings us to the question of balance.

If I have nothing new to offer, nothing original to tell you, nothing to say that you do not already know, my excuse for writing is that we do not always make the best use of the knowledge we have. Speaking after the manner of men, in order to fit shoes successfully, one must be able to think of 418 different things at the same time. If one thinks of only 417 things and forgets the 418th, and it happens to be the most important (which it usually is) the other 417 things go for nothing and the shoes are a failure. It is not easy to think of all these different things at the same time, to see them straight, and to be able to appreciate them at their true individual and relative values.

We can do nothing without a system, and that system is balance. Everything balances, must be made to balance, or it

comes to grief. We are all, consciously or unconsciously, students of balance. Everything we do affects something or somebody else. Sometimes these effects are important and far-reaching, sometimes unimportant. There are all kinds of balances: bone balance, ligament balance and muscle balance. The veins must balance the arteries. There are local and general balances in our anatomy, and these balances act and react on one another.

For this one day will you regard everything from the standpoint of balance? For instance, should you be called upon to prescribe for a boy doubled up with the stomachache, do not hasten to declare that he suffers from green-apple colic. As a student of balance, your first thought should be, this boy has a bad balance; he has a postural curvature of the spine. You must not stop here, satisfied that you have made a diagnosis, and prescribe a brace or the regulation gymnastic exercises. You should reflect further and say that the curvature of the spine is caused by the spasmodic contraction of the muscles; that the contraction of the muscles is caused by the irritation of the nerves, and that the nerves are irritated by the green apple, which lies in the pit of the boy's stomach. In order to correct the balance you must remove the apple. Perhaps this sounds like nonsense, but I assure you that I am absolutely serious. You may say that I have arrived at a perfectly obvious conclusion, after an unnecessary amount of circumlocution. This may be true, but the time wasted was not more than a minute or two; I did arrive at a correct conclusion and I did not overlook anything.

This is the point. The habit of looking at everything as a question of balance gives you a system that helps you to think of the 418 different things at the same time.

If you remember that there is mental, moral and physical balance, no matter at what point on the circle you happen to start, you follow it around until you are able to grasp the whole situation.

It may be urged that the student of balance, while attempting so broad a view, embracing so many subjects, must of necessity become superficial and that the best work is done by

specialists, who devote their entire attention to but one object. This to a certain extent is true, but you must learn to generalize before you can specialize. Specialists are very prone to build fences about themselves, over which they are unable to see.

One could not obtain a very clear idea of an elephant by an exhaustive and painstaking study confined exclusively to the tip of the elephant's tail. The student of balance, if he chanced upon the tip of a tail, would know that there must be something on the other end and he would try to follow it up and find out what that something was. Of course, the student of balance will make mistakes. He will overestimate the importance of one element and underestimate the importance of another. He will find elements that he cannot control and others that he does not understand. His technical skill and knowledge may not be equal to the task before him, or again, if he has the skill and knowledge, he may not have the judgment and tact, but if he is a conscientious student of balance, he will not be blind. He will not forget or overlook things and he will be in a position to use whatever skill, knowledge, judgment and tact he may possess to the best possible advantage.

A student of balance should make a careful study of his patient as a whole; how he stands, walks, runs; how he carries himself; what his occupation; what the state of his general health and what the development of his muscles. Has he any injury or deformity and how do any and all of these things affect his balance?

A man may be compared to a pyramid standing on its apex. Moreover he is a flexible pyramid. He has a skeleton composed of 200 bones and a joint at each end of each bone. He is enabled to stand and keep his balance only by the constant exercise of the strength and coördination of his muscles. If for any reason he loses his balance, he falls to the ground. Now, there are an infinite variety of positions a man may assume and still keep on his feet and keep his balance, but some of these positions involve a much greater strain on the tissues than do others, and no one position in standing can be maintained, for any great length of time, without overstraining the muscles.

In a solid pyramid balanced on its apex, the center of gravity must be exactly over the apex. If it varies by a hair's breadth, the pyramid falls.

When a ballet-dancer stands on one toe, the center of gravity must be exactly over the toe. Her flexible body enables her to assume a variety of attitudes without disturbing the balance, but if one part of her body is bent forward, another part of equal weight must be bent backward to preserve the equilibrium.

It is a fundamental principle of mechanics that when a body is in equilibrium, a vertical line drawn through the center of gravity must fall within the base. We know that the resultant of all the forces which gravity exerts on the particles of the body passes through the center of gravity, that is, the body acts statically, as if its weight were all concentrated at the center of gravity. Hence, if this point be supported, the whole body is supported.

"Wolff, in his law of functional adaptation, shows that if any part of the anatomy is changed from the normal posture to the abnormal, and habitually used, the structures involved undergo a change throughout their entire texture to adapt themselves to the new position. The converse is also true, i. e., if a deformity in which the parts involved have become changed in their shape, is brought back to a corrected position and used, these parts again undergo a change and become normal in their contour." For example, should we wish to correct a lateral curvature of the spine, bearing in mind Wolff's law and the principles of balance, the problem would be to so displace the center of gravity that the force exerted by the attraction of gravitation works to correct and not to increase the deformity. Then Wolff's law works for you and not against you. In order to accomplish this, first try to locate the center of gravity; try to locate the center of motion; try to locate the center of stress.

Remember that a column must have a base, and that the size and angle of the base have a great effect on the superstructure. Remember that force can be brought to bear directly or indirectly on the center of motion. Start with a clear, definite idea of what you are trying to do, and if you cannot do



it in one way, you probably can in another. If braces, shoes and corsets fail to sufficiently displace the center of gravity, you can resort to superimposed weight. All of the weight acts as if it were situated at the center of gravity. If you increase the weight unequally, you force the patient to change his attitude in standing, in order to bring the center of gravity over his base of support. A five-pound bag of shot carried on one shoulder or one hip for a month, will have more effect than one would imagine who has never tried it; or, failing in this, you may resort to recumbency, and thus to a certain extent, eliminate the attraction of gravitation, etc., and lastly (perhaps I should have said firstly, for it is often the best) you may resort to surgery.

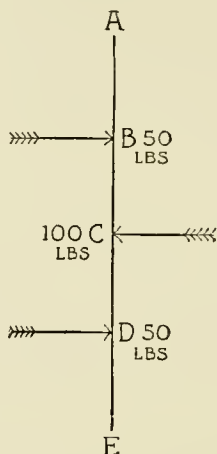
Should you correct a badly set Pott's fracture of the ankle by taking a wedge out of the lower end of the tibia, you might not only straighten the foot, but also cure a strained and painful knee, hip, or sacroiliac joint, or straighten a twisted spine. Center of gravity, center of motion, center of stress. Or, starting from the top, by cutting a contracted sterno-mastoid tendon, you would not only correct a torticollis, but also cure a lateral curvature of the spine.

By removing the supraspinatous portion of a curved scapula, you might not only straighten an anteroposterior curvature of the spine, but cure a pendulous abdomen, displaced kidney, strained sacroiliac or hip, knockknee, pronation and depression of both arches of the foot and ingrowing toenail. Again, center of gravity, center of motion, center of stress.

I distinctly remember that in the days of my youth, when I had a weakness for pointed-toed shoes, that an ingrowing toenail once caused a very troublesome lameness in my right hip. Instinctively, to avoid pressure on the toe, I walked on the outer side of my foot. This, as it chanced, though it relieved the toe, brought an undue strain on the muscles of the hip. All my symptoms were referred to the hip; the original cause seemed quite insignificant, and yet, no amount of treatment applied to the hip would ever have brought about a cure.

'As the logical sequence of the foregoing, and briefly, for the time allotted to me has nearly expired, let me present for your consideration a fenestrated corset and a webbing band.

If the rod AE is subjected to a pressure of 100 pounds at the point C, and meets with resistance or counter pressure at the points B and D equally distant from the point C, there must be a pressure of fifty pounds at the point B, and a pressure



of fifty pounds at the point D. This is the principle of the osteoclast; one point of pressure and two points of counter pressure. But why not pull? It is easier to pull than to push. This is the principle of the bow-leg brace and the principle of the knockknee brace. One point of pull and two points of resistance. Why not apply the same principle to the spine? The lumbar spine is the center of motion of the human body. You are all familiar with the leather shingle, how supplemented with an ordinary corset it fixes the center of motion in ant. post. curvature. Now apply the same principle to lateral curvature. *If you can reverse the lateral curve of the lumbar spine*, you must of necessity reverse the whole balance of the human body.

Thus for example, if the lumbar spine be curved to the left, and the right hip high and the right shoulder low, and you can cause a reversal of this curve so that the lumbar spine is curved to the right, you will find the right hip low, and the right shoulder high. This at first glance may sound too simple to be true. I am aware that all curvatures of the lumbar spine to the left are not accompanied by right hip high and right shoulder low. There are such things as compensatory curves of the spine and compensatory tiltings of the pelvis and rotations of the spine on its own axis, etc., *but the fact remains that the lumbar spine is the center of motion of the human body. Nor does it matter whether the curve of the lumbar spine be primary or compensatory.* If the lumbar spine is abnormally curved to the left and you can cause it to be curved to the right you have changed the entire balance of the whole body; and all the factors, gravity modified by anatomical conditions, Wolff's law, etc., which formerly worked to produce the deformity, will now work to correct the deformity.

The key to the whole situation is the lumbar spine. The lumbar spine is the natural center of gravity, center of motion and center of stress of the whole human body. Torticollis, flat-foot, clubfoot, ingrowing toenail, unilateral knockknee, bowleg, diseases of, injuries to or abnormalities of the ankle, knee, hip and sacroiliac joints, pendulous abdomen and curved scapulæ, in fact anything and everything that affects the balance of the body, affects the curve of the lumbar spine. All these factors (the 418 different things) must be taken into consideration and accounted for, but we must not magnify or exaggerate their importance, nor allow ourselves to be diverted by side issues.

In the mechanical treatment of lateral curvature of the spine, the primary object should be to reverse the lumbar curve. Everything that prevents the reversal of the lumbar curve must be eliminated. If you can once reverse the lumbar curve and hold it, you may *count your cure*. Rotations of the spine on its own axis, tiltings of the pelvis, high or low shoulders, will regulate themselves and require no special attention.

The fenestrated corset is an ordinary plaster of Paris corset made in the usual manner. A large window is cut on either side, a broad webbing band passes over the convexity of the lateral curve of the lumbar spine, doubles over the edge of the window on the opposite side of the corset, returns and buckles. The edges of the window over which the webbing band turns are reinforced with thin strips of steel riveted to the corset. The corset is made to lace in the front so that it can be readily removed.

The fenestrated corset acts directly on the lumbar curve. The pull is over the convexity of the curve and the resistance is divided between the hip and thorax of the opposite side. Pressure can be easily regulated, increased or diminished, to any extent without even removing the corset. To obtain the best results, pressure should be constant, and the corset worn night and day.

If the patient is in a hospital and under full control, the corset can be made much more efficient by making it longer, thus increasing the leverage, and bringing a greater pressure to bear on the center of motion and center of stress. If you wish you may even continue the corset downward over the hip and encircle the thigh, and upward over the shoulder and encircle the arm. Thus by tilting the pelvis, and the yoke made by the clavicles and sternum, in front, and the scapulæ behind, bend the whole spine and thus indirectly increase the pressure on the center of motion and the center of stress, and still further displace the center of gravity.

If you believe that by bending the body forward you can unfasten the interlocked transverse processes of the spinal vertebrae, by all means make your original corset with the body in this position, and then cut your windows and proceed as before.

The fenestrated corset, the ordinary one that does not extend below the hips or above the axilla, the only one with which I have had any actual practical experience, is very comfortable, and patients always like it, because they can see for themselves just what is being accomplished. They soon learn to regulate the pressure for themselves, and become the enthusiastic partners of the physician. The improvement is always marked; at first



*(Photo, by Burr McIntosh)*

A Ballet Dancer Standing on one Toe.



*(From photo. by courtesy of "Recreation.")*

Sprint Runners.





*(Photo. by Burr McIntosh)*

Philippine Scout.





Fenestrated corset and webbing band.



*a*



*b*



*c*

(*a*) Right hip high; left arm hangs close to body. (*b*) Corset applied, posterior view. Notice position of left arm. (*c*) Corset applied, anterior view. Notice position of left arm.



Fenestrated corset. Lateral view.



*a*



*b*

(*a*) Left hip high; left shoulder low. (*b*) Corset applied.



Leather and steel heavily padded brace. On the whole less efficient and less comfortable than the fenestrated corset.



Anterior view.



Posterior view.

Leather and steel brace.

they can see the hollow side filling up, and the flesh bulging into the opening in the corset, and are greatly encouraged.

The patients literally pull themselves out of a hole and wriggle themselves straight as they come through.

### DISCUSSION.

THE PRESIDENT: The discussion on this paper will be opened by Dr. Oliver T. Osborne of New Haven.

DR. OLIVER T. OSBORNE (New Haven): *Mr. President and Gentlemen:* I do not know why I have been asked to discuss this subject. I feel, however, like an after-dinner speaker, that it is not necessary to talk on the subject or know anything about it, in order to speak upon it.

We need orthopedists. There is no question about it. Moreover, they are doing as much for the rectitude of the community as the temperance people, or more. Certain it is that, so far as the question of balance goes, I would make this suggestion: that the balance that we medical men need most is for the internist to remember that when he needs the consultation and activities and science of a specialist, he should not drop the patient. There should be a balance of coöperation. The internist should state his findings, and the orthopedist should state his; and they should both work together to correct the patient's condition.

The speaker has just stated that a specialist may have a hobby, and he, perhaps, does not see past that hobby more than four hundred times. Eighteen times, he may be all right; and the other four hundred times he is riding on that hobby. That, again, means that there should be balance. Take, for instance, our neurasthenic cases, our abdominal dislocations, our ptosis cases, various kinds of neuroses, various kinds of painful reflexes, etc.; and the medical man soon learns that his patient has been from one doctor to another doctor without benefit. In these circumstances, what he should recognize is his need of a specialist—and this specialist is many times an orthopedist; but if he sends the patient absolutely to the orthopedist, this is not as good for the patient as if the two coöperated. This is especially true in our eye-reflex cases. If we send a patient with an eye-reflex (it may be a migraine or a stomach that has been washed out a number of times, with nothing found to be the matter with the stomach) to an oculist, he may not find much trouble with the eyes; but there may be just enough, if he knows the whole history of the case, to enable him to put on correction for a small amount of astigmatism. Then, between the two, they will get the patient well, with the understanding that he shall go back to the oculist, to see whether the glasses are right, just as much as he would

to the orthopedist, to see that the apparatus is right. In that way, I think that we can cure a great many cases of ptosis and other conditions that operative interference will not correct. Operation in cases of loose kidneys, for instance, is not always successful; and it may be a question of balance, which the orthopedist will help us to correct.

THE PRESIDENT: The paper will next be discussed by Dr. William Porter, Jr., of Hartford. Is Dr. Porter here?

DR. WILLIAM PORTER, JR. (Hartford): I am sorry that I did not hear all of Dr. Cook's paper. I am sure that we shall all study it and read it with care, when published. I must heartily agree and also heartily disagree with Dr. Cook's proposition that we start to find out what is really the matter with the patient. I disagree, because I think that that is not alone for the orthopedist, but for all of us. It must be done. It is the one thing that we do not find in order to treat our patients successfully that someone else does find. Dr. Cook and I have been so long and so pleasantly associated that all this work interests me very much. The question of straight legs and straight backs or crooked legs and crooked backs is one of very great importance. I can only ask you all to really read and study his paper carefully, think it over, and actually put it into practice; because I know that it will be useful.

THE PRESIDENT: Does anyone else wish to discuss the question further? If not, we will proceed to the next paper. Oh, I beg your pardon, Dr. Cook; I should have asked you to close the discussion.

DR. ANSEL G. COOK (Hartford): I have nothing to say. Thank you, gentlemen.

## The Clinical Significance of Vertigo.

CHARLES A. MCKENDREE, M.D., CROMWELL.

The physician confronted by vertigo as a prominent symptom or as one of a complication of symptoms should have a working knowledge of all possible morbid processes which etiologically may contribute to its production. In attempting to present this subject, I shall not presume to shed any new light upon a problem fundamentally little understood, but rather to bring before general practitioners of medicine a comprehensive consideration of vertigo from the standpoint of its many causes.

Before entering upon the discussion, I will ask your attention for a few moments to a preliminary outline of the chief sources from which is derived the maintenance of normal equilibrium. The semicircular canals, by means of the endolymph contained within their walls, acquaint us with the position of our body in space. Whenever there is a contradiction between the nervous impulses arising from the labyrinthine structures and the position of the body there arises a disturbance of equilibrium. Any movement of the fluid content sends impulses, by way of the vestibular portion of the auditory nerve, to the coördinating centers within the cerebellum. The strength of the impulse depends upon the nature of the stimulus, and also upon the excitability of the delicate nerve cells within the labyrinth. Individuals vary greatly in the latter respect. Some are predisposed to manifestations of labyrinthine disturbance upon the slightest provocation. Others require a strong irritating influence to bring about even a small degree of reaction.

The cerebellum serves as the general coördinating center for equilibrium, receiving impulses from many sources, chief of which are the semicircular canals. The close connection of the cerebellar centers with those of the oculomotor apparatus is of considerable clinical importance, affording another source of equilibratory balance. The cerebellum receives also, by means of the spinal tracts, those afferent impulses derived from skin, muscle, joint and tendon stimuli.



From the cerebellum it is generally known that fibres lead, by relays, to cells located in the cortex of the cerebral hemispheres, which have as their sole function the regulation of equilibrium.

It is with manifestations of disturbance as reported to consciousness by means of these sources, namely, labyrinthine, ocular and static, that I wish especially to deal. But there are many other factors, whose mechanism is still more unsatisfactorily explained, that will be included in the discussion, as representing forms of equilibratory disturbance. Some of them have to do with mechanism entirely apart from that of the semicircular, cerebellar or optic apparatus, but indirectly involve one or more of them.

The term vertigo in its true etymological sense should signify a turning or reeling, but we have come to employ it for various degrees of equilibratory disturbance. The use of the words dizziness and giddiness, although truly not synonymous, is justifiable in referring to the lesser degrees of instability. Vertigo as described here will include many forms of discomfort, from a mere sensation or feeling of unsteadiness, loss of balance and disturbance of one's bodily relation to space, to the more profound manifestations, such as rotation, subjective or objective.

In obtaining a history from the patient who complains of vertigo it is most important to ascertain exactly what he means, the nature of the sensation that he experiences, whether this sensation precedes a fall or necessitates support, whether there is loss of consciousness for any period of time, the number of previous attacks, if any, their duration and the circumstances surrounding them.

Gowers was one of the first investigators to emphasize the importance of auditory lesions in the production of vertigo. In his well-known series of one hundred and six cases he found the eighth nerve affected in ninety-four.

Auditory vertigo is always associated with more or less marked deafness, often nystagmus to one or the other side and disturbance of equilibrium. There is always a loss in bone con-



duction; and in the minority of cases a persistent tinnitus aurium.

Meniere's disease is truly only one form of the great variety of auditory vertigoes. It should be regarded as a separate and distinct affection. Meniere's is treated by Lake as a disease occurring only in leukæmia and allied blood conditions. McBride states that in order to establish a diagnosis of true Meniere's there must be a history of sudden hemorrhage, embolism, or trauma. Osler believes it may be produced occasionally by a temporary excessive increase in the perilymph, possibly of angioneurotic character. In any case the resulting lesion temporarily deprives the inner ear of an opportunity to afford compensatory changes in pressure.

The acute and chronic forms are generally recognized. By Turner and Stewart the acute attack is described as follows:

"Intense vertigo, with vomiting; rotation of the body and well-defined nystagmus toward the unaffected side. In bed the patient assumes the position of the sound side. The severe symptoms last two or three days and then gradually subside, but nystagmus may persist for a longer period. Eventually all symptoms pass away, leaving deafness and tinnitus."

In the chronic form there may be subjective or objective vertigo, associated with some degree of staggering. The patient is often taken by seizures, being suddenly hurled to the ground, as if struck on the head. Repeated attacks of tinnitus, labyrinthine deafness and severe vertigo suffice to make the diagnosis.

Aural vertigo, on the other hand, embracing many forms, may be produced by progressive ear deafness or arterio-sclerosis. The symptoms commonly seen are vertigo, unilateral deafness and tinnitus. One must remember that he can have a true aural vertigo even when the labyrinthine portion of the auditory nerve is intact. Wax in the external auditory canal pressing upon the tympanum, and violent blowing of the nose, occasionally give rise to this symptom. Middle ear disease, which we include in the consideration of aural vertigo, either by continuity of inflammation, interference with the blood supply, reflected irritation or by producing some obstacle to the normal varia-

tions in intra-labyrinthine pressure, is often the cause of vertigo. Affections of the nasopharynx in general, and particularly of the Eustachian tubes, are important considerations. Labyrinthine symptoms are very rare in acute diseases of the ear.

What can we do to relieve such a patient? The first indication is that of soothing an irritated labyrinth. Milder cases yield to the judicious use of drugs. Sir Victor Horsley, before attempting any of the major methods of relief, advocates an absolute rest treatment, and hydrobromic acid. If there be any evidence of a gouty diathesis he administers drugs against such a possibility. Charcot's classic favoritism for quinine is still advocated by many competent men, usually given in three-grain doses, three or four times daily, omitting the drug several days during the month. Sodium salicylate is used to advantage by many. In the paroxysmal attacks strontium bromide ten to forty grains per day, with complete rest, and immobilization of the head if necessary, is often efficacious. The question of the dietary is important in gouty individuals and also in those manifesting some arterial degeneration. This means essentially a reduction of the proteid food elements, and a quantitative rather than qualitative choice of other foods. Tobacco, alcohol, and coffee are regarded as harmful.

From the investigations of Babinski and others we have gained a second method of great advantage, namely, that of lumbar puncture. By lumbar puncture, intracranial, and therefore intra-labyrinthine, pressure is reduced. Supported notably by Blake and Putnam in this country, this form of treatment has had remarkable results. The most favorable cases are those of short duration, involving only the labyrinth. When the lesions have become so extensive as to produce nerve degeneration one cannot hope for lasting alleviation. Usually ten to fifteen cc. of fluid are withdrawn and the patient is kept at rest for at least twenty-four hours. Ordinarily some improvement is felt after the second day. The local condition is never aggravated by this method of treatment. Blake's experience has been that of temporary amelioration in certain cases, but in the majority, entire relief from vertiginous attacks, varying in

duration from two months to three years, the latter being the major limit of observation. There seems to be a general prejudice against the procedure of lumbar puncture on the ground of disagreeable subsequent results. To be sure, in spite of rest, some patients have headache and nausea following, especially if the fluid has been withdrawn too rapidly. But, as a rule, the amount of suffering undergone for a few hours by the patient is much easier to anticipate than permanent constant tinnitus and vertigo.

The third general method of alleviation is that of vestibulotomy. Bear in mind the fact that the majority of these cases show progressive deafness as one of their features. Surgical intervention destroys hearing entirely, but relieves the vertigo. Shall it be unilateral loss of hearing or the persistence of a most miserable state of vertigo? The choice must be made by the patient, but it is not a matter of great difficulty to persuade him after prolonged medical care has failed to make him comfortable. In cases where the cochlear division of the auditory nerve is not affected vestibulotomy is unjustifiable, unless the diagnosis of aural vertigo is made clearly correct. Lake usually expects a disappearance of the vertiginous sensations within ten days. Yearsley has also reported good surgical results.

Recently Frazier has discussed the value of intracranial division of the auditory nerve for persistent aural vertigo. The results in the case described were only partly successful, but he has every confidence in the operation in carefully selected cases, when performed by those who are familiar with the technic of intracranial procedures.

The visual apparatus is another very important factor in the production of vertigo. Mendel, in 1895, held that all vertigo was due to an altered function of the ocular muscles. This theory has not been supported sufficiently to give it further attention. However, there is a form of disturbed equilibrium due to ocular anomaly which has a distinct place in this discussion. As shown by one observer, it may be imitated in the normal individual by closing one eye, and displacing the other inwards

by finger pressure. The person in attempting to walk a straight line presents an unsteady gait, at the same time often having disagreeable body sensations. Another method by which ocular vertigo may be produced in the healthy individual is that of watching an unfamiliar expansive mass in a state of constant motion, such as a waterfall. A third example is that of the sensation experienced by looking through a prism base upward for a few minutes.

Clinically, ocular vertigo is seen as the manifestation of paralysis or paresis of some nerve supplying the ocular muscles. The presence of diplopia usually makes the diagnosis easy. In diplopia the visual field is falsely projected, and the two resulting images produce in the individual the disturbance of relation to space. The giddiness, if we may call it that, is seldom intense, and occurs only when the affected muscle is called upon.

Of especial interest to us in this connection is the fact that the slighter the ocular anomaly, the more apt is the patient to suffer from vertigo. When the axial deviation is so slight as to be scarcely discoverable by the patient, the two images seem quite close together, and the confusion which results from an endeavor to disentangle them produces the disagreeable sensation. In a well-marked squint, however, such as we often see in tabes, the recognition by the patient of serious defect in visual projection renders the individual less liable to equilibratory disturbance.

It is sometimes held that the vertigo is not due to diplopia directly "because it persists when the eye is covered." Marple demonstrates the insufficiency of such a test. "If," he says, "when one eye is closed, the vertigo does not disappear, it does not exclude the possibility of eye muscle anomaly. If only the good eye is closed, the patient will sometimes project falsely in the direction of the affected muscle, which will result in an apparent swimming of objects when he moves about or turns the head in different directions." Therefore, he makes it a rule to test for the disappearance of vertigo by closing each eye separately. If the condition is one due to paralysis of an ocular nerve, the vertigo will immediately disappear under one of the two manœuvres. In this Grasset coincides.

Of equal interest to us is the difference of opinion as to the treatment of this condition. Many authors have advocated tenotomy or glasses. Marple says that he has never found vertigo due to refractive error or to a corrigible muscular anomaly of the eyes. He has never met with an experience of this sort where tenotomy was indicated. He believes, as we are all coming to believe, that there has been in the past too much snipping of the ocular muscles, and recommends as the only efficient alleviation an exclusion glass.

Seasickness or trainsickness represent a disorder of equilibrium in which both the ocular and labyrinthine apparatus participate. The semicircular canals are pathologically irritated by the motion of the ship or train, and the centers which have to do with the management of coördination cannot follow, with sufficient rapidity, the unexpected changes in motion. It is commonly known that a rolling, rocking movement is more irritating and more likely to cause vertigo and sickness than a pitching movement. This has been experimentally proven to be due to the fact that the superior canals are more easily irritated than the other two.

The ocular apparatus is likewise of vast importance. We know that closing the eyes, in many individuals, dissipates the feeling of vertigo and nausea. On the other hand, we know that blind people may become seasick and in many the greatest amount of turmoil before the eyes produces no disagreeable result. However, it is a fact that in the majority of cases the combination of ocular and labyrinthine factors causes the vertigo and its sequelæ. Some individuals who have proudly maintained a perfect balance, upon looking over the ship's edge at once are forced to seek a horizontal position in an effort to dispel the irritations produced by the violent variations of the visual fields.

Whenever there is disturbance in the paths which normally conduct impulses from the muscles, joints, tendons, etc., we are apt to find the symptom vertigo. Tabes represents one type of organic affection in which the afferent tracts are particularly affected. Hence the loss of deep pain and position sense is

frequently encountered. You know the tabetic gait exists because the patient does not have a true topographical knowledge of himself. The vertiginous manifestations often present themselves when the patient does not use his eyes to determine his balance. Multiple sclerosis and other affections of the cord may also produce vertigo in the same way.

I will now describe briefly some forms of vertigo which have their origin in mechanism outside of the three sources mentioned above, but which, because of their frequent occurrence in practice, are of great importance. For the most part they are manifestations of disturbance indirectly related to the labyrinthine or cerebellar centers.

Vertigo which has as a primary cause vascular degeneration is very common. Often a person complains of dizziness as the only symptom of such organic change. Our usual routine methods of measuring blood pressure are inadequate to sufficiently determine the actual arterial condition within the skull. Vertigo and other aural manifestations lead in many cases to the diagnosis of arterio-sclerosis, not indicated by the peripheral vessels. The brilliant work of Schaumberg demonstrated the fact that as the internal auditory artery is devoid of anastomosis the labyrinth is very easily affected at an early period by degenerative changes. It is interesting to note that vertigo, occurring in these conditions, is particularly prone to occur in the morning hours, a fact accounted for, I presume, by a retardation of the blood stream at that time of day. It may be simple or associated with slow pulse and the more definite signs of intracranial vascular disturbance. Close examination into the life of the patient will usually reveal other evidences of intellectual deterioration, such as failure of memory, lack of concentrative power, irritability, emotionalism, mental depression, etc.

Vertigo occurring in such individuals, in the absence of signs pointing to a lesion purely auditory, should be regarded always as indicative of approaching cerebral lesion. The vertigo occurring so commonly in connection with aortic disease is probably due to alternating anæmia and hyperæmia of the labyrinthine vessels.



Vertigo is often seen in organic brain disease, and especially in conditions of increased intracranial pressure. It is not of great diagnostic significance, as it may occur in a great variety of lesions. In many cases of brain tumor it does not occur at any time, a fact due, I suppose, to the gradual adjustment of the nervous structures to the slowly increasing pressure. It is not of a paroxysmal nature, although in brain lesions any abrupt change of position is apt to produce vertigo. It is particularly with reference to lesions of the pons and cerebellum that vertigo should be regarded as an important symptom. The majority of investigators agree that vertigo of more or less indefinite character is almost always present in tumors of the pons. Krause found in one hundred cases of cerebellar disease, forty-eight complaining of subjective and objective vertigo. Scott and Purves Stewart, among many others, agree that intra-cerebellar tumors usually produce a subjective rotation away from the side of the lesion; extra-cerebellar, a subjective rotation toward the side of the lesion.

We must not lose sight of the fact that intracranial tumors involving the auditory nerve may strikingly simulate aural lesions, because of unilateral deafness and tinnitus aurium. Therefore, the differential diagnosis between cerebellar and vestibular lesions is of great importance. The following differential points gleaned from the teachings of Dejerine and Babinski are usually helpful in establishing the correct diagnosis:

#### CEREBELLAR SIGNS.

Cerebellar gait; absence of Rombergism; dysmetrie (difficulty in measuring the amount and extent of effort required to perform certain tests); dysdiadokokinesia; asynergia; imperfect performance of associated movements; scanning speech; normal response to galvanic tests; ipsilateral hypotonia, etc.

#### VESTIBULAR SIGNS.

Rombergism; whistling bruit; Barany's nystagmus tests and Galvanic tests indicate definite lesion; no voice affection; position of head augments vertigo, etc.



Trousseau's original theory of vertigo being due to gastric disorder no longer holds true. The distinguished clinician did not possess, in his time, the knowledge of the importance of auditory lesions in the production of vertigo. His classic discussion admits of the possibility of a large neurasthenic factor. Recent investigators, including Fischer and Senes, emphasize this element more and more. In those cases where the only demonstrable disorder is gastric, the vertigo is occasioned by the irritation of a hyperæsthetic mucosa which reports indirectly, possibly by way of the pneumogastric nerve, to a labyrinth which is predisposed to hyperexcitability. There is probably no toxic factor involved. Organic disease of the stomach never gives rise to vertiginous sensations.

Toxic vertigo is one of the most common conditions with which the physician comes in contact. "Biliousness" is one of many examples. Acute infections, constipation, tobacco, coffee, alcohol and drugs are also generally known to give rise to the symptom vertigo. We are not in the possession of a satisfactory explanation for such a result. It is true that toxic metabolic products reach the blood stream and circulate as a definite irritative poison. It is my presumption that, as in nausea of central origin, certain cells which deal directly with the maintenance of equilibrium are temporarily disturbed by the toxine.

Physicians have too often rested content with the diagnosis of vertigo as being reflex from the disease of parts remotely connected with the vestibular apparatus. No one can deny the existence of such a possibility, but without first having carefully examined the patient for lesion of the more directly related parts, one is not justified in being satisfied with such an avenue of escape. An individual may very well have an aural or ocular lesion coincidently with, for example, abdominal or pelvic ptosis. The surgeon or internist who hopes to relieve such a vertigo by treating the ptosis will meet with failure. And yet we know that vertigo does exist as a result of such conditions, and in instances likewise as difficult of explanation. Such an instance is that of a purely nasal lesion.

Kyle says that his treatment of nasal trouble has relieved vertigo, but leaves the question open of possible involvement

of the Eustachian tube brought about by the extension of inflammation. In securing information upon this point I have consulted several men of large clinical experience whose diagnoses have carefully excluded a secondary neurasthenic factor or lesions other than purely nasal. Bryant, Smith and Blake agree that nasal polypi, hypertrophied turbinates, etc., may give rise to this symptom. Treatment of these conditions at their hands has relieved the vertigo.

The explanation of reflex vertigo is at best unsatisfactory. We can but agree with Mills that "a disturbance of equilibrium may be produced by the reflection of an abnormal stimulus upon a more or less non-resisting equilibratory apparatus."

Charcot, in 1876, was the first to direct attention to a form of vertigo called laryngeal and ever since his time writers have made reference to it. I can find no justification for assigning any importance to it as a definite form of equilibratory disturbance. Laryngeal vertigo, as such, does not exist. "Unconsciousness after cough," clumsy as the expression is, would better describe the nature of the affection which many men have attempted to describe as a special form of vertigo. In cases of chronic bronchitis or laryngitis, prolonged periods of coughing, occasioned by an irritation in the part affected, have sometimes produced an abrupt loss of consciousness. These attacks may occur frequently and often during the day. The period of unconsciousness may last from a few seconds to two or three minutes. The patient then recovers and has no recollection of what has happened since he began his spasmodic, uncontrollable coughing. A typical case of this affection which I had the opportunity of studying occurred in a man of middle age who had been afflicted with chronic bronchitis for a period of twenty years. There were no true vertiginous sensations experienced in his case. The condition was one of prolonged cough, sudden loss of consciousness and fall to the ground, and occurred twice within a few days. There have been no recurrences in the past two years. This is the affection called laryngeal vertigo. In consulting the literature I have been unable to find a single case described in which definite vertigo was experienced by the patient immediately preceding the attack. Gray regards it as a form of

epilepsy. Cases reported certainly do not seem to bear out such an explanation. In fact, the majority of patients have not shown at any time epileptic tendencies. Assigning the label epileptic to an affection implies cortical irritation. To be sure, the cases for the most part occur in middle age, and often in alcoholics, in whom chronic throat affections are common. We might well expect epileptic manifestations in such individuals. But the fact that, as in the above case, there are often no recurrences, and that a patient may present no other signs of epilepsy does not, to my mind, justify such an explanation.

Some of our foremost observers attribute the condition to laryngeal spasm, or spasm of the glottis resulting in temporary asphyxia; the fall and period of unconsciousness being due to asphyxia, and not to any labyrinthine disturbance. Horne reported the case of a patient who had three attacks, with loss of consciousness in only one. In the other two, the prolonged cough was accompanied by a sense of suffocation. In these cases, it would seem to me, a lesser degree of spasm might account for the lesser effect upon the organism.

The vertigo which ushers in attacks of petit mal is frequently overlooked and interpreted as due to other causes. It is rarely more than a confusion of mind. It should not be misconstrued if the examiner has been careful to ascertain all the facts in the patient's history as mentioned above. Loss of consciousness is the important differential point.

Vertigo occurring in neurotic subjects is extremely worthy of our attention. The neuroses sometimes complicate many truly organic lesions, being coincident with them, secondary to them or simulating them. As I have shown above, vertigo which previously might have been called gastric, is now often justifiably placed in the field of neurotic manifestations. It is needless to add how often neurasthenia is complicated by both ocular and gastric irritation.

Vertigo of true neurasthenic origin occurs in attacks usually of short duration, of the subjective type; not accompanied by nausea and vomiting. It is apt to occur when an abrupt change of position is undertaken. Recumbency does not necessarily

relieve the condition. The gait may be affected by this form of vertigo, but it has been my experience to find added to the sensation, an element of fear, fear of falling, a feeling of helplessness. The patient is therefore ready with her hands to grasp support if, during her attempts to walk, it should become necessary. That which seems to me quite characteristic is the detailed, concise, description given by the patient. Under close observation by the physician, the subjective symptoms are usually intensified. Some neurasthenics can bring on an attack at will. I may add that in those cases called psychasthenic the above is true in a more exaggerated form.

In the neuroses that do or do not exhibit stomach disorder, undue physical or mental excitement or prolonged mental application markedly increase the vertigo, a fact which coincides with Trousseau's description of the so-called gastric type.

Vertigo appearing in the hysterical individual is usually of a different type. The patient, during an examination or consultation, gives us some finely executed objective signs of giddiness without apparently noticing it subjectively and there is less complaint than in the neurasthenic type. Such a patient will walk a straight line, as in neurasthenia, although the execution may be exceedingly uncertain.

The "essential vertigo" described by Weir Mitchell many years ago is now for the most part explained in terms of local causal conditions.

As no physician is justified in diagnosing a functional nervous disorder without first having eliminated every physical element, so no physician is justified in calling vertigo neurotic without first having eliminated all, each and every one, of the possible contributing factors.

#### DISCUSSION.

**THE PRESIDENT:** The discussion on this paper, according to the programme, will be opened by Dr. Charles N. Haskell of Bridgeport.

**DR. CHARLES N. HASKELL (Bridgeport):** Dr. McKendree has left very little to be said with regard to vertigo. I shall have to confine myself to one or two minor points for discussion.

First, it would be well to say that the eighth nerve has two functions, one being auditory, and the other having to do with equilibrium. The portion that runs from the cochlea to the medulla, and from there to the first and second convolutions of the sphenotemporal lobe, is the auditory part; and the part that runs to the cerebellum and the nuclei, the most important of which is the nucleus of Deiter, has to do with equilibrium. Dr. McKendree leaves the inference that brain tumors are not always, or perhaps not often, accompanied by vertigo. I must take issue with him in regard to that statement; because one of the first things to think of when we suspect the presence of brain tumor is whether there be vertigo.

Another thing that I wish to speak of is the function of the red nucleus as a reflex, or relay station. The fibers passing from the cortex of the middle lobe of the cerebellum go through this, and I am inclined to think that the neurons are also connected with the cortex of the cerebrum. This probably has to do with reflex conditions in which conscious maintenance of equilibrium is brought to bear only when unconscious equilibrium is interfered with, as in tabes. If any interference takes place in the tracts between the labyrinth and the cerebellum, and between the cerebellum and the midbrain or the thalamus, or the red nucleus, and between that and the cerebral cortex, there must be some vertigo; so that one of the first things that we think of in connection with the possibility of brain tumor is vertigo.

I think Dr. McKendree makes lumbar puncture too formidable a procedure. Dr. Tukey and I did one some eighteen years ago, and I have done a great number since, without any ill results. I never have seen any ill effects, except in one or two cases, in which the needle was broken off in the spinal canal; and even these cases were not accompanied with bad results.

A good point that Dr. McKendree makes is that we should be cognizant of the ordinary causes of vertigo, such as the reflex causes, like neurasthenia, epigastric ptosis, etc. These are not always the causes of vertigo, Dr. McKendree said; and we should always look for the more serious causes, before allowing ourselves to believe that the trouble is due to a disordered stomach or something of that sort.

Another matter that I wish to mention is with regard to eye conditions in vertigo; but perhaps that had better be left to the one who is to discuss the paper later. The paper will be discussed by an ear man and an eye man; but nystagmus and other reflexes connected with the labyrinth, also the caloric tests, have not, I think, so far been emphasized enough.

THE PRESIDENT: The discussion will be continued by Dr. Henry L. Swain of New Haven.



DR. HENRY L. SWAIN (New Haven): As has already been made so plain to you by the preceding speakers, vertigo is an exceedingly interesting and contradictory sort of a symptom. While always, in the final relations, a phenomenon of functional or organic disturbance of the internal ear, still, it is a symptom of many general diseases of the most varied types; on the other hand, originating as it sometimes does, within the temporal bone itself, it is a sign of the beginning of a purulent labyrinthitis, which may eventuate into general meningitis and death.

The extremely interesting objective symptom of vertigo, nystagmus, is most significant of the connection between the two important functions of sight and equilibrium. Then, again, there is to be chronicled that there is spontaneous oscillation of the eyes produced by aural lesions; and there are ocular conditions which produce marked vertigo, independent of any lesion of the ear. Marked vertigo, by the conditions inherent in arterio-sclerosis, occurs with increased blood pressure; and the simple rotative test for ear-disease will throw to the floor a big, strong man whose blood pressure is below normal. In the one case vertigo is produced by the increased pressure within the labyrinth due to hemorrhage into the internal ear. If there is sudden loss of pressure, by accident or operative interference, the fluid in the internal ear is lost; and again, vertigo of the most pronounced type may result.

Plainly, then, any condition, local or general, influencing that status of the semicircular canals of the internal ear that is normal for that individual may result in vertigo. This being the case, the resources of the clinician are often taxed to explain the dizziness; and frequently it is of no particular moment, only as it fills in one spot in the clinical picture. When, however, it is associated with a purulent middle-ear process, it then becomes a matter of extreme importance, as you all know; and such cases need to be most carefully watched. Not every case with such conditions should be placed on the operating table, and a so-called radical operation upon the labyrinth performed—quite the contrary; but such a dizziness is a sure sign that something is not right. If simple measures, like removing cholesteatomatous masses or polyp tissue, do not remove this danger-signal, real surgery must be employed in order to avoid the danger of meningitis. Even in non-purulent cases, as was stated in the paper, consideration is being more and more directed to the propriety of opening the labyrinth, when life has become such a burden as it sometimes is, owing to the extreme dizziness—and often made thrice as intolerable by the terrible tinnitus. It is, of course, understood that such a method will destroy the usefulness of the internal ear, obliterating all hearing power; but still, it is justifiable.

Referring again to the occurrence of vertigo in such absolutely opposite conditions, the fact is emphasized by the remedies used. In some

forms of dizziness, small doses of quinine, with a happily adjusted dose of bromide or hydrobromic acid, will work wonders. In others, we must use ernutin, or some other preparation of ergot. In one class of cases, strychnine should be employed; in another, pilocarpine. In one case, strong glasses removes all trouble; in another, weaker ones bring about the same happy result. In a simple case, a good calomel purge is useful; in a more complicated one, the surgery already referred to. Fortunately, most cases belong to the mild group; and it is only within very recent years, and as a distinct advance, that radical surgical intervention has become safe and feasible.

THE PRESIDENT: I will call on Dr. Frank K. Hallock of Cromwell to continue the discussion on Dr. McKendree's paper.

DR. FRANK K. HALLOCK (Cromwell): My active interest in the subject of vertigo began eighteen years ago while studying a case of Ménière's disease. The report of this case was presented to the American Neurological Association in 1896. Continuing this interest, I prepared a paper entitled, "Equilibrium and Its Relation to Vertigo," which was presented to the same society the following year. The two main points which I tried to establish in this latter paper were these: First, that the act of equilibration or maintenance of body balance was one of the primary, fundamental attributes of the organism. There may be some question as to whether it is proper to call the act of equilibration primary, but certainly it is of very basic importance, from the fact that the position of the body in space and its relation to all external objects always exists or lies in the background of consciousness. The second point related to the great part which the cortical centers or the particular state of consciousness has to do with the development of vertiginous sensations.

Clinically, I should divide the symptom vertigo or dizziness, including all grades and degrees, into the following varieties: First, the vertigoes which result from either an organic or functional disturbance of the organs or parts of the nervous system which have to do most directly with the act of equilibration. This class involves, either peripherally or centrally, first, aural disturbances affecting directly or indirectly the semicircular canals; second, ocular disturbances; and third, disturbances of the statical sense from muscles, joints, etc. These vertigoes may be called true or primary vertigoes. The second class, or the more indirect vertiginous sensations, are secondary, for example, to blood and vascular conditions, disordered functions, etc. The third class of vertigoes are those which are due to transitory physiological disturbances. The fourth class may be called the psychic, or psycho-genetic vertiginous sensations.

This classification is more or less arbitrary, and from the extremely complex nature of the symptom, it is realized at once that any given



attack of vertigo or dizziness usually involves several factors, for example in sea-sickness. In all of them the state of consciousness is a great factor, even in the case of the true vertigoes where we have quite a definite and perhaps single lesion. In both the second and third classes the cortical centers which subtend the psychic state are a relatively more important factor than in the vertigoes of the first class. In the psycho-genetic vertigoes, of course, the main factor is the cortical centers themselves, although in nearly every such case there is an accompanying external or internal stimulus which acts as an excitant to the association centers.

The true vertigoes have been sufficiently spoken of. In the class of secondary vertigoes I would make two divisions. First, the vertiginous sensations due to states of the blood and vascular system, such as anemia, toxemia, arterial tension, arterio-sclerotic and cardio-vascular conditions. This sub-class might be included among the primary vertigoes as far as the symptom vertigo *per se* is concerned; for these conditions may operate directly upon parts of the equilibratory apparatus, either peripherally or centrally. The other sub-class of the secondary vertigoes are those due to disordered functions or disturbance of almost any part of the body. These are the so-called reflex vertigoes,—stomachic, laryngeal, hepatic, intestinal, pelvic, etc.

In the physiological vertigoes I should include those induced by galvanism, inflation of the ear, rotation, etc., and the ocular dizziness resulting from watching moving objects, riding backwards, etc. The psycho-genetic vertigoes include the dizziness which may come to one speaking before an audience, the dream vertigoes, and the psychic vertigo of psychasthenic suffering from agoraphobia, claustrophobia and other phobias.

The physiological, of course, are also very largely psychological or psycho-genetic; for instance, in looking over a precipice or from a high building, and the same applies in watching moving objects, the stimuli through the medium of the ocular apparatus represent in consciousness an unaccustomed spatial relationship of the body.

Stating the mechanism of vertigo as concisely as possible, we must remember first of all that the position of the body in space and the maintenance of its equilibrium is profoundly fundamental, so that whenever there is the slightest disturbance of this sense of equilibrium, whether it be from the force of an idea, as in the neurasthenic or psychasthenic individual, or whether the disturbance is due to the unhabitual peripheral stimuli, consciousness is immediately aware of something being wrong. The concept and feeling that arises is that of dizziness. The second fact to remember is, that to a very great degree, upon the particular state of the cortical centers representing the basis of consciousness depends the power of peripheral stimuli to cause

vertigo; that is, if consciousness is preoccupied, or is in a strong and stable condition, the peripheral stimuli may make little impression in bringing about the concept and feeling of dizziness. On the other hand, if the state of consciousness is weak and sensitive, very slight stimuli from any disordered function of the body will favor the production of vertigo, if there exists the slightest disposition in that direction. The third fact to bear in mind relates chiefly to the explanation of the reflex vertiges. It is this, that the stimuli, which result from a disordered part of the body, do not necessarily operate directly upon the equilibratory apparatus or its centers. On the contrary, it is most probable that the equilibratory centers are secondarily affected as the result of the disturbed cortical centers, which subtend consciousness. For example, in gastric vertigo the stimuli from a disordered stomach have a peculiar disorganizing, more or less demoralizing effect upon the general state of consciousness and the distress and disorder which thus arise in consciousness expresses itself by exciting a vertiginous sensation. It is a kind of projection process. In other words, whenever consciousness is more or less profoundly disturbed, one of the ways in which this is manifested is the production of a vertiginous feeling, which means that the organism is so affected that to a varying degree it loses its sense of position in space.

This is a fair supposition psychologically and I think also anatomically, because unless we conceive of the operation of intermediate centers we would experience a vertiginous sensation every time we were stomach-sick or had any very unusual series of stimuli from any part of the body. We may infer also, that the individuals who are especially susceptible to vertigo have a sensitive and responsive equilibratory apparatus. That is, this apparatus is one of the more or less favorite channels by which, according to the psychological law, consciousness expresses itself objectively.

THE PRESIDENT: We should be glad to hear from any other gentlemen who are interested in this subject.

DR. CHARLES FITZGERALD (New Haven): Dr. McKendree's paper invites discussion from those interested in the surgery of the ear, because nystagmus is just now at about the boiling point of interest to otologists. For instance, in our cases of chronic suppurative otitis media, if nystagmus is present, we are content to perform the radical mastoid operation; but we must be prepared to follow this with the radical labyrinth operation if the presence of nystagmus cannot be demonstrated by one of the various methods. I consider that the operative treatment in otology is largely, and in some cases solely, determined by the presence of nystagmus. If the labyrinth does not respond to artificial

irritation, we have no indicator left to point out the further progress of the disease; and the next symptoms may be those of meningitis. Therefore, I think that the radical mastoid operation should be performed in all cases of circumscribed labyrinthitis; and if, on the second or third day following the operation, vertigo with nystagmus to the healthy side, vomiting and disturbance of equilibrium come on, we know that we are dealing with a secondary diffuse serous labyrinthitis or a diffuse suppurative labyrinthitis. In perhaps one-half the cases of circumscribed labyrinthitis I have observed, the symptoms I have mentioned followed the radical mastoid operation; but, as nystagmus could be produced, the labyrinth operation was not performed and no subsequent purulent labyrinthitis was observed. This shows the practical advantage of timely recognition and operation in such cases, and the importance of the symptom of vertigo with nystagmus.

DR. DORLAND SMITH (Bridgeport): I want to emphasize one point made by the last speaker (Dr. Fitzgerald), in regard to the aural vertigo. The work of Professor Politzer's assistants has thrown a good deal of light upon the causation of this condition. While knowledge of this work often makes precise diagnosis possible, its complications may also somewhat confuse our ideas. But, out of all these complications, one big clinical fact has been brought out which is useful to all of us, i. e., if the vertigo is aural in origin, nystagmus accompanies it; if there is no nystagmus the vertigo is not due to the ear.

DR. E. TERRY SMITH (Hartford): This symptom of vertigo is one of the most prominent that the oculist or the aurist is called on to treat. The most frequent cause for it referable to the eye is a slight paralysis of the extrinsic ocular muscles; and the most frequent cause referable to the ear is some disturbance in the middle ear. The nerve-supply of the ear tells us why. The way that we get our space perception is by means of the second branch of the auditory nerve, which goes to the middle lobe of the cerebellum; and any disturbance of that nerve causes a disturbance of the space perception. A person with a little catarrh of the Eustachian tube will sometimes have such a disturbance of space perception on going into a tunnel, sometimes simulating Ménière's disease. If such persons go to a high altitude, the rarefaction of the air will cause the same symptoms. People are sometimes affected so severely in this way that they have to be led to a physician, yet a simple catheterization of the Eustachian tube will often relieve the symptoms completely; and several of these catheterizations will frequently cure the condition. The most common cause referable to the eye is a slight paralysis of the extrinsic muscles, in which the patient gets a duplication of images. A slight paralysis of the extrinsic muscles

of the eye, and a slight disturbance in the middle ear, which disturbs the pressure in the internal ear, are the two most frequent causes. The latter disturbs the nerve endings of the auditory nerve that have to do with space perception.

THE PRESIDENT: Is there any more discussion of this paper? If not, I will call on Dr. McKendree to close the discussion.

DR. CHARLES A. MCKENDREE (Cromwell): Dr. Haskell seems to have obtained the impression that lumbar puncture in my experience is not a procedure to be recommended because of disagreeable subsequent results. As a matter of fact, I consider it, and think it is considered by most men, to be the most valuable adjunct that we have to the treatment of persistent aural vertigo. Babinski, who has done valuable work on this point in recent years, holds this view and is supported in this country notably by Blake and Putnam. Their results have been remarkable and I would take the opportunity of emphasizing here the importance of lumbar puncture in the treatment of persistent vertigo. Lack of time did not permit me to do so when reading my paper.

Dr. Fitzgerald spoke of chronic suppurative otitis media. In the discussion I was not at any time dealing with a suppurative condition, and therefore, a radical mastoid operation before a labyrinthotomy should not be considered in this connection.

Dr. E. Terry Smith brought out the importance of disturbances within the nasopharynx. I had expected to create some discussion on the point that ocular vertigo is caused by a paresis of a nerve supplying the ocular muscles. A great many men believe that ocular vertigo is caused by muscular defect and also due to errors of refraction. However, I believe that the greater number of the most recent investigators hold that it is never due to refractive error, nor to anything but a nerve lesion.

## The Work of the Infant Welfare Association of New Haven.

JOSEPH I. LINDE, M.D., NEW HAVEN.

"One thousand babies that should live, die every day in the United States" (1) was a statement which appeared in one of our popular magazines a few months ago; to this statement can be added that most of these babies are under one year of age and generally born with normal physique. This and many other similar statements which have appeared within the last few years in various lay articles have been the world's recognition of the terrible mortality of children under one year. Prophylactic medicine has made wonderful strides during the last two decades, but only within the last ten years has any united effort been made in the reduction of infant mortality.

The first attempts towards the reduction of infant mortality were made by the establishment of milk depots, or milk stations, where pure milk could be obtained for the babies.

One of the first of these to be established was the Hamburg depot, in 1889, followed shortly by another establishment in the same year by Dr. Koplick at the Eastern Dispensary in New York. In 1892 Dr. Pierre Budin of Paris, impressed by the high death rate of infants and the low birth rate in France, organized in connection with his clinic at the Charité Hospital classes or conferences for mothers, at which class instruction was given as to the care of the infants. Shortly after this Dr. Variot of Paris and Dr. Dufer at Fecamp organized the "Goutte de Lait," or milk depots. These were established primarily, of course, to supply pure milk to artificially fed babies, but as in Dr. Budin's classes, instruction was one of the important aims of the work. About a year later in this country the Straus Laboratories were founded and the very excellent work which Mr. Straus has accomplished by this philanthropy is not new to any of us. Since that time all civilized countries have made

rapid strides in the endeavor to reduce infant mortality. In 1903, France, the pioneer in this line of work, called an international conference, which has been followed by international congresses held in Brussels and in Berlin. In November, 1909, at a meeting held in our own State, the American Association for the Study and the Prevention of Infant Mortality was founded.

The mortality statistics of the registration area of the United States in 1910 show that 19 per cent., or about one-fifth, of all deaths were under one year of age, and it is interesting to note that of these deaths, 29 per cent. were due to diarrhœa and enteritis, 13 per cent. due to premature birth, and 10 per cent. due to wasting diseases, as marasmus, and to lack of care (2). These three causes show the highest percentages of deaths and surely some of these deaths are preventable, yes, I might say one-half of these deaths are preventable.

Improper feeding, lack of personal cleanliness, flies and dirty milk usually cover the etiology of diarrhœal diseases; to be sure, weather conditions have some effect on the death rate due to enteritis, but it is almost negligible when these other conditions are considered.

Poor heredity, unsanitary housing and ignorance are the chief causes of the wasting disease, while poor heredity and ignorance of the pregnant mother would cover most of the deaths due to premature birth.

The furnishing of clean milk alone will not correct all these causes; the constant supervision of these babies and the education of the mothers, the fathers, and the whole families in the fundamental rules of hygiene and cleanliness, as well as careful prenatal supervision of the mother, the encouragement and the instance of breast feeding wherever possible, are fully as important as pure milk. In fact, one of our most noted workers on the reduction of infant mortality has said "the solution is 20 per cent. pure milk and 80 per cent. training of the mothers," (3) and Abraham Jacobi in his address before our parent society in 1912 said: "By breast feeding you will save 100,000 babies that now die or become invalids from no other



cause but unnatural feeding" (4). Innumerable statistics show that breast-fed babies stand the battle many times better than artificially fed infants, but I will not bore you with the figures.

In the summer of 1906 it was my good fortune to assist Dr. Bartlett in his work on the bacteriology of the milk supply of New Haven. This was the first systematic bacteriological work done in New Haven on milk. Previously very careful inspection, fat content estimated, and tests for preservatives had been made by the Board of Health; soon after this the city began to examine the milk supply bacteriologically, and although not absolutely conclusive, the following figures compiled by Dr. Wright, Health Officer of New Haven are interesting.

The mortality statistics of diarrhoeal diseases in New Haven under five years of age (the increase in population is about 2,500 a year):

1905.....	144 deaths.
1906.....	139 "
1907.....	96 "
1908.....	109 "
1909.....	109 "
1910.....	112 "
1911.....	86 "
1912.....	95 "

The Board of Finance of New Haven for the first time has made an appropriation to the Board of Health for the employment of nurses for instructing and educating mothers and householders in the proper care of milk after it has been delivered, and in the care of children and infants during the summer. The appropriation, although small, is a start, and I sincerely hope that in time the closest coöperation of the work of the Infant Welfare Association and the city will take place, as has taken place in New York, where these individual societies and the Board of Health have joined for the following reasons:

1. To prevent duplication of the work.
2. To establish some uniform system of record keeping.
3. To render information in the possession of one group available to all.



4. To conduct a publicity campaign in the interests of the reduction of infant mortality (5).

We have the Health Officer's assurance of his Board's coöperation and plans have already been formulated so that the work will be carried out to the best advantage of all concerned.

In 1909 a committee was appointed from the Consumer's League to dispense pure milk to babies. The milk was modified in the laboratory and then dispensed to the mothers at the lowest possible price. Standardized formulæ were used; two years' whole milk modifications were used, and one year percentage modifications. In exceptional cases special formulæ were made up.

In 1912 the Pure Milk Committee withdrew from the Consumer's League and began its work as the Infant Welfare Association. Although much good had been accomplished by the milk stations, to quote from the President's report, the system of dispensing milk already prepared has grave faults:

"In the first place it is very expensive, and though this is perhaps an argument to struggle against if the method is otherwise perfect, it must be given serious consideration. Secondly, it has no educative value, and makes even the best mother absolutely dependent on the existence of the station; and thirdly, even more vital, it may become a center for the spread of the moral weakening that ensues when one is relieved of his natural responsibilities, among which the care of one's children ranks first. It was quite too easy for the average parent to send a little sister or brother with eight cents and receive the bottles of milk all prepared for the next twenty-four hours. The nurse took the responsibility; the nurse did the work; all the mother had to do was to provide the baby. So one by one the cities have changed their methods, and now we are putting the work on the mothers, where it belongs, but teaching and watching them, and sometimes in special need preparing it for them, and it has been really wonderful to see how they have responded to it. We did not make the change ourselves without most careful consideration, for it seemed almost inconceivable that the modification of milk and sterilizing of the utensils, which is at first alarming to the best trained of us, could be managed successfully by an Italian or Polish mother in a two or three-room tenement. But New York, Chicago, and Baltimore assured us of their success, and Fall River, also, which has a very low class of foreigners, and we persevered" (6).

With that end in view, arrangements were made with the Visiting Nurse Association to supply the nurses, and thanks to the good judgment of that organization, nurses that were interested and specially trained in baby work were supplied. Miss Gilbert, a woman whose patience and good judgment helped make the work such a success, was placed in charge. In the early part of the season she was sent to New York to study the methods of the various stations, and she returned well qualified.

The work was divided into four stations, the Lowell House, New Haven Dispensary, St. Paul's Neighborhood House, and the Ivy Street Station. A physician and nurse and assistants were assigned to each. Once a week conferences were held, when the babies were brought to be weighed, examined by the doctor in charge, if necessary, advice given and formulæ changed if required. Great care was taken by all in charge that sick babies were referred back to their own physicians, so that no practitioner could say cases were taken away from him. At the Dispensary Station most of the cases were from the Pediatric Clinic and had simply been turned over to the Association, so that the problem of feeding sick babies presented itself more at that station than any other.

After each baby's history had been taken, the baby weighed, and a suitable formula given, if it was to be fed artificially, the mother was taken to the laboratory and a lesson given in the preparation of the milk. The utensils, milk, sugar, etc., were supplied to her at cost. The next day a nurse would go to her house and carry on the instruction, and continue to go until the mother was proficient in the modifying. Many times, for some reason where it was impossible for the mother to prepare the milk, the father or a brother or sister did the work very satisfactorily. Sick babies were visited daily, or as often as necessary, by the nurses, and many treatments, as baths and irrigations, were given as often as ordered by the physician in charge of the case.

As many special formulæ, such as Finkelstein's, whey and buttermilk preparations, were prescribed, these were prepared at

the stations and dispensed there. In a few cases it was found impossible to have the formulæ made up at home and they were prepared at the stations. These occasions, however, were rare.

The milk used was, as a rule, supplied at the stations, the mothers coming in and buying the milk at cost. The supply was the best that could be procured in New Haven and from a dairy whose reputation is national. In many cases the mothers preferred to have the milk delivered at their homes; the only obligation imposed was that it was to be furnished by a milk dealer whose name was on the milk list of the New Haven Medical Association.

Literature in English, Yiddish, and Italian, with information as regards care of the baby and the importance of cleanliness, was distributed. Postal cards addressed to the Society with the words "My baby is sick" were left at each home. Careful supervision, the most important factor of all in the reduction of infant mortality, was always carried out.

Towards the end of the summer prenatal instruction was begun.

On account of the shortage of funds it was necessary to close the stations on October 1, and the mothers were forced to buy the milk directly from the dealers; again milk from credited dairies only was allowed to be used. Conferences at the Dispensary and the Lowell House were continued, and the diet kitchen at the latter place was used for the preparation of special formulæ.

In cases where actual want existed the milk and supplies were furnished by the Association without cost. Through the kindness of Mr. Mossman and the Register Fresh Air Fund free car tickets were supplied for short excursions to the neighboring beaches. Free beds were procured in many cases when hospital treatment was needed.

Eleven hundred dollars had been paid in from May 1st to October 1st and the monthly average cost per baby has dropped from \$5 by the old method to \$2.75 per baby by the new, leaving a substantial balance in the treasury, so that at least a part of the work could be continued during the winter.

From May 1st, 1912, to October 1st, 304 babies were enrolled; of these 223 were fed on modified milk, 39 entirely breast-fed and 42 receiving supplemental feeding; 180 was the largest number at any one time.

The following is the mortality record from May to October :

	Within 36 hours of admission	After
Diarrhœal diseases .....	1	1
Tuberculous .....	0	3
Diseases of malnutrition .....	2	3
Miscellaneous, cause unknown ...	1	1 syphilis. 1 following an operation. 2 premature birth.

From October 1, 1912, to February 1, 1913, the following figures are available: 118 cases enrolled, 94 bottle-fed babies, 5 breast-fed babies, and 19 receiving mixed feedings.

At the Dispensary Station, with which I was associated, there were 117 babies enrolled; of these, 85 were sick when brought. Ten marasmic and vomiting babies were fed Finklestein's formula and the results were uniformly good. It surely is surprising to see how quickly these atrophic, oftentimes vomiting babies, do well with this eiweissmilch. The preparation of this formula is very important, especially in breaking up the curd and in separating the whey; the nurses working it through the sieve five or six times. Dextri-maltose was used in many cases, where the gain did not seem to be sufficient, and too much cannot be said in favor of the use of malt sugars in cases where the infants seem to digest well, but no gain is made. Stool examination and breast-milk analyses were frequently made at the Dispensary Station, and caloric values were always taken into consideration. A few of our cases were over two years of age, and suitable diets were arranged for them.

During the school year of the Yale Medical School the group of Senior and Junior students assigned to the Pediatric Clinic have taken an active part at the conferences and difficult feeding cases were shown to the whole Junior and Senior classes. Nothing need be said of the value of work of this sort to the

medical student, where feeding cases can be followed and watched once a week, and more often if necessary, for the whole school year.

The coming season the work will be carried out in the same general manner. More time, however, will be devoted to the prenatal work and the feeding of older children.

The reduction of infant mortality, the raising of healthy children to healthy manhood and womanhood, are the problems of all infant welfare societies. The dispensing of pure milk can not alone accomplish this; the careful prenatal supervision, the education of students, physicians, nurses, laity and all, are necessary; this, perhaps in a small way, the New Haven Infant Welfare Association is endeavoring to accomplish.

1. Annette Austin, *Pearson's*, Dec., 1912.
2. *Census Bureau Bulletin*, No. 109.
3. Baker, S. J., *Am. J., Dis. of Chil.*, Feb., 1913.
4. Jacobi, A., *Med. Rec.*, June 8, 1912.
5. Report N. Y. Milk Committee, 1912.
6. Report New Haven Infant Welfare Association, 1912.

## DISCUSSION.

THE PRESIDENT: The discussion on this paper will be opened by Dr. Julia Teele of New Haven.

DR. TEELE (New Haven): I have very little to add to this admirable paper, but I want to emphasize almost every word of it. Scientific philanthropy has regard to two things: the study of conditions and the changes in them, and the education of the people. The thing that I regard as the most important branch of medicine also deals with this. Preventive medicine and scientific philanthropy join hands in infant-welfare work.

We have had modified milk for the babies in New Haven ever since the establishment of the first station, four years ago. At first, we had standardized formulæ; but we felt that these were inadequate, because there was no individualization. The formulæ were prescribed according to the age. As a rule, a baby of a certain age had given to it a certain formula, without much consideration as to the condition of the infant. There was very little individualization of the baby. It was left largely with the nurse in charge. Doctors' conferences were not begun until about a year ago. Then the system of home-modification was begun; and I consider it far superior to the standard formulæ, largely for its

educational value, which was very great. A great many people say that you cannot make these ignorant people do these things. That is not true, however. Of course, there are a few who cannot be taught; but the majority can be. Every mother, no matter what her station in life may be, loves her baby, and will do her best for it. There are careless mothers, who cannot be educated; but, as a rule, they will try hard to do these things. This training is educational, not only in the way of mixing the milk for the baby, but also in the way of general cleanliness.

Then, at our conferences on Mondays, we give instruction, not only in the feeding of the baby, but also in general hygiene. You will see the copies of the little cards that are given to the women—sometimes printed in their own language, but also in English. These are explained to them; and the mothers are taught about the bathing and clothing of the babies, and the care of the home.

Every week, if possible, the babies are seen. At the Lowell House, we had about fifty babies last year. We are pleased that our work kept up through the winter when we did not supply the milk. We simply recommended the milkmen, and required the mothers to bring the babies each week throughout the winter to receive advice in regard to them. They buy their milk and the sugar, and what they get at the conferences is only the good advice. That they value this is shown by the fact that they came fairly regularly with great enthusiasm; and that a few of them would come even on the stormy and cold days.

Then I want to lay emphasis on a kind of work that should be developed, and that is the prenatal work. The nurse visits the prospective mother. If we can educate her, that is a step ahead. The nurse gives her advice as to the care of herself and of the coming baby. She examines the urine for albumin; and she advises the prospective mother to have a doctor, if possible, and in regard to going to a hospital. We are trying to work out more and more in the line of prenatal work, and I think that this is a work with a great future before it. I hope that it will be taken up more and more.

THE PRESIDENT: The next man to open this discussion is Dr. Harry M. Steele of New Haven.

DR. HARRY M. STEELE (New Haven): *Mr. President and Gentlemen:* In my opinion, Dr. Linde's paper is more open to compliment than to discussion. It is quite entirely due to his painstaking attention that the system of infant feeding used in the New Haven Dispensary has been the success it is, and which his figures conclusively prove.

There is one point, however, that I believe worthy of repetition, or further consideration. That is the value the scheme has as an educa-



tional factor. At the beginning of our attempts in New Haven to furnish babies a clean, wholesome milk, I was absolutely convinced of the necessity of station-made modifications and mixtures. It did not seem possible to me that the class of mothers we met could ever be taught the cleanliness necessary to meet the requirements of successful artificial feeding. It also seemed to me that the cost of the educational campaign would be all out of proportion to the expense of the distributing stations. As a matter of fact, the cost has been materially lower; and, under the guidance of Miss Gilbert and her able, enthusiastic assistants, a clean milk has been made possible in a tenement where the only thing clean was the milk and the utensils used in its preparation.

THE PRESIDENT: Is there any further discussion of this paper?

DR. KATE C. MEAD (Middletown): I want to say that, in a way, I represent the work done in Middletown; and we have cut down the price there for caring for milk-station babies from two dollars and a half to forty-nine cents each. As a matter of fact, our nurses are not graduate nurses. We have practical nurses that do some of our baby work; and then we have untrained people that just weigh the babies and do similar things. We have been able to get only money enough to run the milk station for three months of the year; but even so, we have cut the death rate down one-half. Middletown milk is said to be "good." The State Laboratory is located there, and the milk is under constant inspection and examination.

One thing that we have had to struggle with is that some of the babies saved in the summer die in the winter of pneumonia, because we cannot yet afford to have the nurses keep track of them during the winter. We have a District Nurses' Association, but these nurses are not employed to look after well babies. The sick babies are not sent to a doctor soon enough, because they are not seen by someone who is able to detect early signs of disease. I am anxious to know how frequently the New Haven doctors have found pneumonia in the winter among these station babies.

DR. FRANK W. WRIGHT (New Haven): The Health Department has been doing a good deal of work in New Haven. We have been examining the milk as to its quality, and have had a very good quality of milk; but five or six years ago we found that our milk was dirty. Then we started farm inspection and laboratory examination of the milk. The first year, the death rate was reduced thirty-four per cent. below the average for the three previous years. Now, for several years, our death rate has been approximately fifty per cent. less than that. We believe that we have the milk producers and the milk dealers pretty well educated; and that it is the consumer that needs education,—the mother



that feeds the baby. We have appropriations for five months' work during the summer. We have engaged nurses, and propose to start them to teach the consumers how to care for the milk, and let them know that they are responsible for the milk from the time it is delivered to them. In addition, the nurses will teach the mothers how to prepare milk for their babies. We have decided not to attempt to treat the sick babies. We shall refer them to the Welfare Station and have Dr. Linde attend to them. I think that we shall accomplish a great deal of good in that way, and I hope to have enough money to put on a good corps of nurses all during the summer.

DR. ARTHUR S. BRACKETT (Bristol): It seems to me that we should enlist all the agencies possible in such a movement as this. I think, also, that the same people who look after the Welfare Associations of different places are connected with associations in the different churches, etc. They are all right, but what are the school authorities doing? It seems to me that the best thing to do would be to put it to the school authorities, and say that the reason that the babies are dying so frequently is that their mothers are ignorant. The school authorities are not fulfilling their scope. There is no one so easy to teach about babies as the eight to twelve years old girl. There is no one who cares for babies so much, except the mother, as the child of this age; and these girls will take a very active interest in the subject, if instructed with regard to it. Then, too, the schools ought to be used at night for lectures along these lines. It is not now either necessary or right that a few persons should stand the expense of all this. It should be put to the State that the schools ought to be used as teaching centers.

THE PRESIDENT: Is there any further discussion? If not, I will call on Dr. Linde for some closing remarks.

DR. JOSEPH I. LINDE (New Haven): Regarding pneumonia during the winter among these babies, I would say that we have had some. I do not know the exact figures, but if you wish to know them, I will find out exactly how many cases there were. I should like to show the charts that I have brought in connection with my paper.

This is the kind of chart that the physicians use, and this is the diet list for older children. This is the prenatal chart. This chart shows the map of the city. The dots indicate where we have cases. They are scattered from Foxon to West Haven. This is the literature that is put into the homes and displayed in conspicuous places. This pamphlet urges the importance of breast-feeding, daily care of the bottles, fresh air, etc. These are a few snap charts taken from the nurses at the Lowell House Station.

## Dr. Eli Todd and the Early Days of the Hartford Retreat.

CHARLES W. PAGE, M.D., HARTFORD.

Among Connecticut's medical worthies, that have been long neglected and almost forgotten, Eli Todd, the first Superintendent of Hartford Retreat, deserves high rank, if indeed, in respect of character, ability and deeds, his record is not the most illustrious of them all.

In the year 1715 the General Assembly of the State of Connecticut revised its Public Statutes, one act of which reads as follows, viz.:

"When and so often as it shall happen to any person to be naturally wanting of understanding, so as to be incapable to provide for him, or her, self; or by the Providence of God, shall fall into distraction and become non compos mentis, and no relative appear that will undertake the care of providing for them, or that stands in so near a degree as that by law they may be compelled thereto; in such cases the selectmen or overseers of the poor of the town, or Peculiar where such person was born, or is by law an inhabitant, be and hereby are empowered and required to take effectual care, and make necessary provision for the relief, support and safety of such impotent or distracted person," etc., etc.

For the next century, in the State of Connecticut, no more direct or specific laws regarding the insane were enacted. Meantime any surroundings, however unfitted, cramped and forbidding, any devices, however galling and cruel, deemed by ignorant or inexperienced relatives as proper measures for confining or restricting the insane were adopted without exciting public protest, or more than passing interest, with those exceptional instances where attending physicians had had their sympathies engaged by observing the unnecessary hardships frequently imposed upon neglected or abused cases.

In 1812 Dr. Nathan Dwight of Colchester wrote a paper reciting existing conditions and suggesting the need of a public hospital for the insane.

His paper was read at the State Medical Convention and, as a result, a committee, with Dr. M. F. Coggs well as chairman, was appointed to obtain further information and report to the next annual Convention.

In 1813 this committee, having made little progress, was authorized to continue its investigations. Probably it accomplished nothing further, as in 1814 the State Medical Society appointed Drs. Coggs well and Strong a committee to ascertain the number of insane in the State.

They requested the Association of Congregational Clergymen, which society had members residing in every town, to supply the facts. It was supposed that each community in the State could thus be canvassed by local agents, familiar with actual conditions. Yet the report which came through the clergymen was obviously incorrect and the subject received no further consideration by the Society until after the lapse of several years.

But Connecticut physicians were too deeply concerned for the unfortunate insane to abandon efforts in their behalf. At the spring meeting of the Hartford County Medical Society in 1821 the subject was again introduced, and this time by men who had carefully considered it and who were ready to suggest practical measures by which to solve the various problems involved. Action resulted, and the Fellows of the Society were instructed to bring this matter of the insane before the State Convention at its next meeting, in May. This was done, and as a result the State Medical Society appointed Drs. Eli Todd, Thomas Miner and Samuel B. Woodward a committee to formulate a working proposition for the Society.

Dr. Todd, then living in Hartford, was evidently the master promoter of this movement in the County Society. It appears that he had become thoroughly informed as to the usual, and the exceptional methods then in vogue for treating the insane; and having convinced himself that very recent improvements in an English asylum marked a great advance, he resolved that the State of Connecticut should be provided at once with a central asylum, where the more rational methods of care could be

employed to improve the condition of the insane. In this Todd was ably supported by Woodward, who resided in Wethersfield.

These two men, general practitioners of medicine, were remarkable for their intellectual poise, their practical sense and their executive ability. Both men were destined to work out here in New England practical reforms in managing the insane. By their personal service in the cause, and their published reports, they virtually moulded for many years, in this section of the country, professional opinions regarding the custody and proper treatment of the insane.

Moreover, the methods of hospital management which these two Connecticut men subsequently inaugurated, Dr. Todd at the Hartford Retreat and Dr. Woodward at the Worcester State Hospital, accorded with institutional standards which are, and will ever remain, preëminent in respect of humane considerations and skillful employment of moral agencies. When, therefore, the medical convention deferred to the judgment of these men, its action was well considered.

The committee reported at once that "immediate work to secure an asylum for the insane ought to be instituted." Whereupon, the State Society added Drs. William Tully and George Sumner to the committee, and instructed its members "to proceed in the undertaking and formulate a constitution for the regulation and government of such an asylum."

The importance and urgency of this humane departure in the care of Connecticut insane so strongly appealed to these kind-hearted and clear-headed doctors, that the committee was requested to report at an adjourned session to be held for that purpose on the 3d of the ensuing October. On the day appointed, the convention re-assembled and listened to the report of the committee. This report was such a masterly presentation of the cause—showing such complete insight as regarded actual conditions which confronted them, and such comprehensive knowledge of what had been attempted elsewhere, and what could be done in the way of bettering the conditions of the insane—that copious extracts from it are necessary to do simple justice to the author—Dr. Todd (in all probability).

"It appears," they state, "that in 70 towns there are somewhat more than 500 cases of insanity. Fifty-four towns remain to be heard from; and should the disorder be found equally prevalent in them, the entire number in the State will scarcely fall short of 1,000.

"Their situation is wretched in the extreme. The victims of moody melancholy constitute a class of beings enslaved by the phantoms of their own imagination—phantoms which hover around their dwelling and pursue them in their customary rambles. As they enter a home endeared to them by many a fond recollection, the anxious countenances of a family once lightened by the rays of cheerfulness and hope, serve to depress hearts already overloaded with sorrow.

"In their whole intercourse with society, their spirits are wounded by a sneer or a jest. . . . The force of their disease is augmented from day to day, and at last suicide or confirmed insanity is the result of accumulated, though imaginary, insanity. . . . But the poor maniac doomed to confinement in the lonely dungeon, and often to wear chains, which should be reserved for guilt alone, claims our intercession and sympathy. In most cases he retains mind enough to see that he is an outcast from society, or associated with its most infamous members. Thus situated, and retaining a consciousness of his own innocence, he feels he is injured and abused. . . .

"The wretchedness of those families upon which devolves the care and maintenance of the insane can be estimated only by those who from personal observation have become acquainted with its extent. We infer that while the causes which have been enumerated continue to operate, mental alienation will continue to prevail, and in private practice no disorder is more unmanageable.

"The patient suffers from want of that steady course of discipline which is equally removed from cruelty and indulgence. . . . It often happens that the character and 'rank' of the patient prohibit the use of those salutary measures which in a public institution might be pursued.

"Is he the master of a family? The recollection of his former ascendancy, and the idea of his personal rights, will cling to him until he is removed from the dwelling over which he claims control. Is he a child? Accustomed to indulgence, he brooks no restraint, but reproaches for their cruelty all who oppose his ungoverned passion. A madman in his own house is, of all situations, the worst. . . .

"Painful indeed would have been the duty assigned us, if, after investigating the extent of this evil, we had seen no prospect of its diminution. But when we turn our attention towards an asylum established on humane principles, and presenting to the unfortunate sufferers who enter its portals, all that ingenuity can suggest or benevolence bestow for the cure of their disorder; that cheering prospect is ours.



"Such an asylum should be the reverse of everything which usually enters into our conception of a mad-house. It should not be a jail in which, for individual and public security, unfortunate maniacs are confined; neither should it be a hospital merely, where they may have the benefit of medical treatment,—for without moral management, the most judicious course of medication is rarely successful. . . .

"At the present time, it is not to be expected that we should do more than barely sketch the outlines of a place which may hereafter be modified by circumstances and matured by reflection.

"If the unanimous opinion of the committee receives the sanction of the convention, the first step will be to make the public acquainted with the value and need of the contemplated asylum. And when that is once effected, we doubt not but it will find an advocate and a patron in every friend of the public welfare. . . . Much will depend upon the judicious choice of medical and domestic attendants. . . .

"Our aim will be to guard against abuses, . . . and we shall call upon those to whom the insane are to be entrusted, to act with deliberation and prudence. The friends of the unhappy patients must be assured that no efforts will be wanting to correct the delusions and arouse the dormant energies of the mind diseased. They must be assured that the inmates of this asylum will in all cases be treated with humanity, subject to no unnecessary rigors of discipline, and controlled by no force unless their personal safety requires it. The chains and the scourge, which have too often been the implements of coercion, must be abolished, and every attendant dismissed from the institution who resorts to violence in the performance of his ordinary duties.

"The history and ceremony of the Retreat established by the Society of Friends in the neighborhood of York, England, may be consulted with pleasure and profit. It furnishes a lucid view of the effect of moral management, and teaches how much may be effected by the perseverance and the charity of the few. For many years that asylum excited little attention, and received as little patronage; but it now has assumed its preëminent rank, to which, from its superior regulation, it is justly entitled. Its managers appear, however, to have placed too little reliance upon the efficacy of medicine in the treatment of insanity.

"In ancient Egypt, the insane were conducted to those temples in which were collected whatever seemed calculated to please the eye and rivet the attention. There, as they wandered from one magnificent object to another, the world and its vexations were forgotten, and amid the deep interests of the scene, the gloomy images which haunted them were banished from the mind.

"In Greece, on the other hand, the followers of Hippocrates relied exclusively on the specific power of hellebore and its adjuvants, medicines which at this day are rarely employed.

"Among the improvements of modern science must be ranked the coöperation of these two modes of practice. . . In the contemplated asylum, many whose cases are now deemed hopeless would regain their reason. Many a wandering maniac might have been restored to health, if, at the commencement of his disorder, he had been placed in such an institution. On this subject, however, we wish no one to rely on the bare assertion of the committee, and appeal to statements, the truth of which cannot be doubted, to prove the justness of these observations. Dr. Willis, in his evidence before the Parliament of England, stated that nine out of ten cases recovered if placed under his care within three months of the attack. In the great French hospital over which Pinel so ably presided, the records present the same flattering results. And in the extensive practice of Dr. Burrows, the proportion of cures has been still greater. What has been the experience of physicians in this State, we leave for others to decide; but excepting cases of delirium which occur in febrile and other disorders, it is feared that a large proportion of the insane never regain their reason. . . .

"As Christians, and as men, it is our duty to alleviate the sufferings of others, as physicians it is also our imperative duty to use every exertion for the improvement of insanity. No one conversant with the records of our profession can hesitate for a moment to believe that its interest would be greatly promoted by adopting the plan we have suggested. . . .

"With this view of the subject we conclude, believing that the convention will take immediate measures for the formation of a Society for the Relief of the Insane."

It was reported that Dr. Todd's graphic description of the suffering and neglected insane, and his confident prediction of radical improvements in their lot, with a brilliant record of recoveries, if only the members of the State Medical Society would earnestly work together for such ends, deeply moved his auditors, many of whom actually shed tears.

How well considered, and how very advanced, were these theories pertaining to the care and treatment of the insane, can be fully appreciated only as they are contrasted with the general ignorance and apathy on this subject, which at that time almost universally prevailed. There was a degree of public indifference, at least, concerning the mentally afflicted, which entailed common neglect and almost as common abuse of the innocent victims of this deprecated disease.



What the insane suffered in former times is too widely understood to require a restatement of the too abundant facts on record.

That the Connecticut physicians derived their inspiration and warrant from European sources, is evident from passages in their brief which has been quoted. But the bright picture they painted must have come from isolated examples.

The only act of the English Parliament before 1808 which bore upon the care and protection of the lunatic poor was the law of 1744; and that authorized "any two justices to apprehend those who are so distracted in their senses that they may be too dangerous to be permitted to go at large, and have them securely locked up and chained."

In 1806 Parliament appointed a committee instructed to "inquire into the state of pauper lunatics," but no legislation followed.

In 1807 Sir George Paul stated, "Of all the lunatics in the kingdom, not one-half are under any kind of protection from ill treatment, or placed in a situation to be relieved of their malady."

But shocking revelations in regard to asylum abuses, which became public about 1815, so disturbed public sentiment that in 1819 Parliament did enact a law "For the better care of the pauper insane." This act, however, delegated insufficient power and authority to the commissioners to effect any radical elimination of existing abuses.

It was not until 1844, twenty years after the Hartford Retreat was founded, that England gave to its Lunacy Commission the authority and support necessary to correct faults and abolish abuses in the treatment of all classes of the insane. Meantime private mad-houses, scattered throughout England, had no doubt been guilty of the greatest injustice toward the insane.

Complaints against such proprietary establishments reached Parliament from time to time; and in 1773 a bill "For the regulation of private mad-houses" was submitted, but did not become the law. In 1774 a bill directing the authorities to issue a license for a private mad-house "to all persons desiring it," was passed. The English Government had been slow in providing special

institutions for the insane, consequently many money-making private hospitals flourished. The reputation of such places became such that there arose a strong public sentiment favoring the establishment of larger, semi-public, incorporated asylums for the accommodation of the insane. An institution of this class, named the "York County Asylum," was founded upon a charitable basis in 1776 in the city of York. Its reputation was equal to that enjoyed by the best of its class, when in 1791 "the friends of a patient who was confined there were refused admission, under circumstances which aroused suspicions, and with only too much reason, as events proved." This sad instance of "man's inhumanity to man" became a landmark in the history of insanity. The unfortunate victim was a member of the Society of Friends. And the indignity and cruelty inflicted on that patient so wrought upon the sympathy of the Quaker leaders, that they determined to provide for their own insane an asylum, the affairs of which they could wholly control; a fitting place of detention, where the Quaker theory of life and duty—the spirit of the Golden Rule, interpreted by the Quaker intelligence and faithfulness—could accomplish its perfect work in caring for the insane. This was a most important starting-point for modern methods of humane treatment of the insane, especially in English-speaking countries.

It is true that Pinel in France was at that time treating the insane along similar lines, and in the following year, 1792, he characterized the new era for the insane by a wholesale removal of chains from supposedly dangerous maniacs in a Paris hospital. But the political troubles of that country at that period so obscured individual efforts for the uplift of humanity, that Pinel's work was not generally understood and appreciated until considerable time had elapsed. The York Quakers did not learn the facts concerning Pinel's masterly stroke until 1806, therefore their conception of a home for the insane was wholly without precedent so far as they had knowledge of the subject.

The acknowledged leader of this movement to establish the York Retreat was William Tuke, who represented a family which for several generations had conducted in York a wholesale tea

and coffee business. He with several others began collecting funds for an asylum in 1792; but the building, with accommodations for sixty patients, was not completed until 1796.

The Quakers were unwilling to call their philanthropic project an asylum, because that word had become associated in their minds with too much that was painful and forbidding. For a time they were much concerned over this matter, when finally Tuke's daughter-in-law, Mrs. Henry Tuke, suggested the very appropriate name "Retreat," which they readily adopted, deeming this happy solution of their perplexity an augury of future success.

In this hospital of original ideas,—this York Retreat,—not only were the long-time hardships and abuses, which the insane had hitherto received, eliminated; but medical treatment was for a long time almost ignored. A retired physician, Tuke's brother-in-law, assisted him for two months when patients were first admitted. But after his death Tuke was in absolute charge for a year or more, until they secured the services of another layman, Mr. Jepson, who became an excellent manager in time under Tuke's oversight. It is probable that York physicians were brought in to treat patients who developed symptoms of acute, obstinate disease, but no resident physician or medical superintendent was officially connected with the York Retreat in its early history.

The consequences of this unusual hospital arrangement were momentous. At a stroke, quietly and innocently applied, traditional modes of caring for the insane,—the routine undesirable hospital practices, and pernicious personal experience with the old order,—were simply blotted out. Had an "experienced" physician been employed to manage the York Retreat, the authority of the schools and the fancied dignity of the profession would have dwarfed, in his mind, the utility of those simple, practical, humane measures, clever devices and social arts which Tuke depended upon, and successfully, to control the conduct and regulate the lives of his insane wards.

The open-minded non-professional Tuke administered mild domestic remedies and the warm bath. He learned that tonics

and a liberal diet promoted cheerful spirits as they improved the bodily health. He antidoted inclinations to turbulent conduct by providing regular employment for his patients and mitigated insomnia by giving them hearty meat suppers with a liberal supply of porter. He planned agreeable occupation—something to engage the mind while exercising the body; such as gardening, household duties, riding, walking, sewing, embroidery, reading, singing, games, instrumental music, etc., etc.; all to be performed with order and regularity, even to dining-room habits, retiring at night and rising in the morning,—thus enforcing a mild but salutary discipline. He acted upon the theory that self-esteem on the part of the patient was more potent than threats and appeals to fear. To successfully control patients through such inducements, every incident of the day required constant attention, with unwavering kindness on the part of the attendant or nurse, and a judicious oversight on the part of the management.

Thus Tuke evolved his system of treatment,—a mode of caring for the insane which wonderfully ameliorated the worst features of the disease, and convinced unprejudiced observers that even the cure of insanity, in many cases, depended more upon humane than medical agencies. In the process of time this dependence upon moral influences in the care of the insane came to be discussed and referred to as “the moral treatment of the insane.”

Once started on its noble career, the York Retreat went quietly about its humane work, attracting but little local attention. Meantime it was visited by a number of discerning foreigners, who were deeply impressed by the absence of ordinary asylum features, the unexpected quiet and the family atmosphere which pervaded the institution. As a result, several laudatory articles appeared in foreign publications. Dr. Ferrus, physician to Napoleon I, wrote that it was “the first asylum in England which arrested the attention of foreigners.” He extolled “the home-like arrangements, and the moral treatment, which Tuke had conceived and was testing out; the abolition of unnecessary restraint; the absence of irksome discipline; the quiet and

orderly disposition of the place, and the evident value of industrial employment."

Dr. Delarine, a Swiss physician, commented enthusiastically concerning the institution after a visit of inspection. He compared it to "an ordinary farm colony"; and expressed surprise that "the house had no window bars or gratings." It was through this Swiss doctor that Pinel, in 1797, first heard of Tuke's enterprise in York.

After the York Retreat had been in successful operation for a dozen or more years, Samuel Tuke, a son of William, published several articles claiming that "the institution had demonstrated the beneficial results of humane ideas consistently applied to the treatment of insanity." In 1813 he published in book form a "Description of the York Retreat," which served to spread its reputation and fame. This book, with its novel claims, naturally attracted marked attention. It provoked discussion and aroused serious-minded hospital managers. Thus by direct and indirect means it accomplished great good, marking the beginning of better treatment of the insane in civilized nations.

Sydney Smith wrote a lengthy notice of this book. His article was published in the *Edinburgh Review*, in April, 1814. The writer observed that "the Society of Friends seemed to consult the interests of the patients rather than those of the keepers"; that "the superintendent preferred to run some risk rather than use restraint"; that "he placed little dependence upon medicine alone for the cure of insanity," but "very frequently employed the warm bath with the happiest results"; and concluded that "upon the whole, we have little doubt that this is the best managed asylum for the insane that has ever been established, and part of the explanation no doubt is, that the Quakers take more pains than other people with their insane."

But this "Description of York Retreat" received few such appreciative notices, and it met with some hostility and detraction.

Willful and malicious misrepresentations of the Retreat and its internal affairs were freely circulated. The head physician



of the neighboring York County Asylum anonymously published, in a local paper, most bitter and unfounded attacks.

Eventually these libelous publications so aroused the non-combating Quakers, that William Tuke decided to expose conditions in the county asylum, the abode of his most annoying enemies. Conforming to the plan of foundation, a number of Quakers became members of the governing board of that asylum through liberal subscriptions. They soon made a searching investigation; and the revelations, shocking beyond the expectation of Tuke and his friends, checked open calumny of the Retreat, and awakened a widespread public interest on this subject.

But unfortunately for the insane, there persisted, in official circles especially, much opposition to Retreat methods, due to tradition, erroneous ideas of expediency, and official indifference. On the whole, however, an enlightened public opinion gradually brought about many favorable modifications in asylum practice, though it was many years before the insane in confinement were emancipated from unnecessary restrictions and grievous cruelties.

At the time when Dr. Todd in Connecticut was giving such glowing accounts of the Quaker system of moral management, English physicians as a rule were either skeptical or neutral regarding its advantage or feasibility. No other asylum in England had openly adopted Tuke's views, and excepting the practice of Pinel in Paris, the York Retreat was the only known public institution for the insane where such radical but mild methods of treatment were systematically enforced.

There can be no question as to the source from which Dr. Todd and his medical associates derived their ideas upon the subject of hospital treatment for the insane, since they adopted the very name "Retreat," and copied, even to details, the organization in York. The formation of a society of contributors, and ranking them in accordance with the sum each subscribed, was the English plan embodied and transplanted. There is no record that any of those Connecticut physicians had visited York. But, without doubt, they had studied and mastered Samuel Tuke's "Description of the York Retreat," one edition of which was published in Philadelphia in 1814.

To have passed over the many prominent asylums for insane which then existed in America and England, and to have accepted as their pattern the exceptional York Retreat, conspicuous for its humane Christian treatment of the insane; to have informed themselves so wisely and thoroughly; and to have become so enthusiastic regarding the Quaker theories, so far in advance of those times,—is indication of their discriminating judgment and their philanthropic zeal.

Thus equipped for the important task before them, Dr. Todd and his co-workers strove diligently to secure a Connecticut Retreat; and with a degree of assurance that overcame opposition, and a spirit of enthusiasm that actuated a wide circle of interested citizens.

The subscription committee of the Connecticut Medical Society met in New Haven in May, 1822, and found that \$12,000 had been pledged. To this sum the State Medical Convention soon after added \$600, all the available funds then in its treasury. During the same month a memorial was addressed to the General Assembly, then in session, praying for a charter, which would legalize their organization, and confer power to purchase the necessary land, build and maintain an asylum for the treatment and custody of insane patients.

Having previously considered, at some length, the committee report made by Dr. Todd before the State Medical Society, and its stirring effects upon that usually sedate body, it can be imagined with what command of relevant facts, with what logic and pathos Dr. Todd and his medical companions in this humane enterprise appealed to the committee of the Legislature. When Dr. Todd was impelled by a sense of justice he could phrase brilliant and persuasive figures of speech.

Referring to Todd's rare oratorical endowments, the late Henry Barnard, LL.D., Hartford's noted educator, wrote, "No man of my recollection, and I have in my lifetime been thrown with many of the foremost men of the world, so impressed me as a public speaker."

Evidently the speakers for the Connecticut Medical Society acquitted themselves with credit, for the desired charter was immediately granted.



But that instrument, important as it was, is not the only document extant to prove that those devoted representatives of this Society offered brilliant and convincing arguments; that they disclosed ample grounds of assurance for the faith which kindled and sustained their enthusiasm, regarding the improvements possible for the insane in the State.

The joint resolution, relative to the act of incorporation, is a State paper which merits reproduction in this historical review, since it abounds with spontaneous evidence that those pioneers in American hospital reforms had fully persuaded the law-makers of the State that, at length, the most perplexing problems associated with insanity were fully comprehended, and that the proposed solution would fulfill their sanguine expectations. In fact, it appears that the committee of the Legislature was so completely captivated by the doctors and their proposition, that its members seemed to vie with the medical committee in promoting this exceptionally important measure, so replete with promise of public good.

Their unique resolution reads as follows, viz.:

"The Joint Committee to whom was referred the Petition of Thomas Hubbard, and others, on the subject of the establishment of an asylum, or Retreat, for the Insane in this State, praying for an act of incorporation; respectfully report that they have enquired into the truth of the facts as stated in said Petition, and find that in May 1821 the Connecticut Medical Convention appointed a committee to ascertain the number of insane persons within the State of Connecticut, and made report thereon to said convention in October 1821, when it appeared that there were in this State more than 1000 persons suffering under the disease of insanity. The Medical Convention thereupon appointed committees to solicit donations for the purpose of purchasing lands and erecting buildings for the proposed asylum, for which benevolent object more than twelve thousand dollars has been subscribed. The Committee further find that the members of said Medical Convention have made almost unexampled exertions to promote the objects of said asylum, and have besides most liberally appropriated therefor the whole of their funds, amounting to six hundred dollars.

"It has also been proved to the Committee, by the statement of physicians of high respectability, the truth and the correctness of which the Committee cannot doubt, that very important and valuable discoveries and improvements have been made in Europe, particularly in England and

France, in the art of curing and relieving the insane in regard to both medical and moral management, and that mildness of treatment has been most successfully substituted for chains and violent restraint, and that upon an average, 91 in 100 cases of recent insanity are treated successfully, and that out of 100 old cases, generally deemed helpless, 35 of those unfortunate persons have been restored to health, to their friends and to society. To produce such desirable results, it is indispensably necessary that a Retreat should be provided for the sufferers under this grievous and terrible calamity, where they may remain under the constant supervision of professional gentlemen of skill and experience in the modern and approved mode of treatment and cure.

"It is the avowed, and in the opinion of this Committee, the fixed and sincere, intention of the Petitioners, to introduce into this State the modern improvements and discoveries above referred to, and to admit into the asylum, the indigent as well as the rich, upon moderate and reasonable terms.

"For which laudable intention, and for the persevering efforts already made by them to carry it into effect, the members of said (Medical) Commission are richly entitled to the thanks and gratitude of their fellow-citizens.

"Notwithstanding the enterprise and the extraordinary zeal and liberality of the projectors and patrons of this humane institution to promote its interests, it is feared by the Committee that without the aid and patronage of the General Assembly it may droop or totally fail of success. But the Committee have good reason to believe that with such aid and patronage it would soon become an institution of great public utility, honorable to the character of the State, and to the cause of humanity.

"Strongly impressed with these considerations, the Committee recommend a special grant on said Petition, viz.: That the petitioners and such others as they may associate with them, be made and constituted a body politic by the name of The President and Directors of the Retreat for the Insane; that \$5,000 be granted to said institution from the public funds, payable whenever, if within two years, \$15,000, exclusive of this grant, shall have been subscribed, and \$10,000 thereof actually paid to the treasurer of said corporation for the benefit thereof, and that the Governor be authorized to grant a brief for five years, one a year, soliciting contributions for the benefit of said institution.

(Signed) AUSTIN OLCOTT."

The charter granted embraced the recommendations of the committee and the general specifications included in the petition. The plan of organization was copied from English precedents. Some of the details were as follows, viz.:

"This Society shall be comprised of those subscribers whose benefactions shall amount to either of the subsequent sums: Those who pay \$20 shall be members for life. Those who pay \$12 shall be members for 10 years. Those who pay \$2 shall be members of the Society, and shall be required to pay the same annually until their names are withdrawn from the subscriber's list on application to the Secretary. \$200 paid by the Connecticut Medical Society shall constitute the President and Fellows *ex-officio* members of the Society.

"Those subscribers who pay \$100 or an equivalent annuity, or \$25 annually for 5 years, shall be Directors for life. Those who pay \$200 shall be Vice-Presidents for life. Any subscriber paying \$200 may at all times name one indigent patient who is to be received into the asylum upon the most favorable terms. Any town, corporate body, or association of individuals, paying \$250 may have the same privilege."

Section IV. provided for the appointment of a Superintendent as follows, viz.:

"There shall be a physician for the Retreat, who shall be nominated by a committee of five members appointed by the Medical Convention, and their nomination shall be transmitted to the Board of Directors for their approbation, if a Board of Directors shall be established by the by-laws of the corporation, otherwise to the Society for their approbation. If the person thus nominated shall not be approved, said committee shall nominate another person without delay. If the nomination shall be approved, the election shall be declared valid, and the person thus elected may hold his office until removed by a majority of the whole number of Directors. The medical and moral treatment of the patients shall be confided to him, and he is to determine the propriety of their admission and discharge."

This clause of the charter, which was designed to enable the State Medical Society to control the medical management of the Retreat, was eminently logical and proper, since the institution was the substantial reward of great faith and hard work on the part of that medical fraternity. Besides, in those days well-informed medical men were the only class of citizens competent to determine the fitness of candidates for the position of Superintendent.

Section III. of the charter gives additional evidence that the State Society regarded the practical activities of this medical establishment as being properly within its supervisory duties,

as it provides for constant and continuous independent medical inspection in the following terms, viz.:

"There shall be six visitors, physicians; two at least shall visit the Retreat every month. . . . They shall inquire into the medical and moral concerns of the institution, suggest improvements and designate abuses."

Two years later, at the May session of the General Assembly in 1824, this charter was amended by the omission of many details in the original, regarding subscribers, who should constitute the society, and other matters concerning the organization, management, etc., which could be regulated to better purpose and with greater facility in accordance with a constitution and by-laws devised by the managing officials, and changeable where working experience discovered a necessity therefor. This 1824 charter remained unaltered for eighty-one years.

The original charter having been obtained, rapid progress followed and the subscribers to the Retreat fund met in Middletown, October 28, 1822, to organize as a society. Dr. Woodward was appointed clerk. It was found that \$20,000, exclusive of the State grant, had been pledged. There were more than 2,000 individual subscribers. Thirteen had given \$200 each, and were therefore Vice-Presidents. Nineteen had given \$100 each and were Directors for life.

December 3, 1822, an adjourned meeting was held in Hartford to perfect business arrangements. It was then voted to locate the asylum in Hartford. Accordingly, a site in the southern part of the city was purchased, and early thereafter building operations were commenced.

The managing officials met January 7, 1823, and elected Dr. Eli Todd, Physician to the Retreat. At first he demurred, fearing his acceptance to that office would lead the public to construe his strenuous efforts to establish the Retreat as personal and selfish. But he ultimately yielded to the unanimous solicitude of all interested parties.

"He first brought the attention of physicians to the need of a Retreat," according to Dr. Woodward, "and when the object of his long contemplation and ardent desires was an accom-

plished fact, as if by general consent, he was selected as Physician and Superintendent to carry into effect the benevolent plan of its founders."

Eli Todd was born in New Haven, in 1770. After the death of his father, a prosperous merchant, in 1776, he lived four years with Rev. Jonathan Todd, D.D., of East Guilford, and subsequently with Rev. Elisha Goodrich of Durham. Young Todd was fitted for college by these two doctors of divinity. He entered Yale in 1783 and graduated four years later, "distinguished for his literary and scientific attainments."

He then spent one year in the West Indies, where he contracted yellow fever. After his recovery he studied medicine in the office of Dr. Beardsley in New Haven, and commenced practice in Farmington in 1790, before he was twenty years old. He remained there twenty-nine years, gradually acquiring a large practice and high repute for knowledge and skill.

At one time he was induced to open an office in New York, where he remained only a short time, as he soon realized that he preferred a country life and practice. In 1808 a serious epidemic of spotted fever broke out in Farmington, and persisted for fifteen months. Seven hundred cases were seriously affected, and the death rate was high. The people became exhausted, and then frightened. Many fled the town and outside help could not be obtained. Panic prevailed and for months the streets were almost deserted. Dr. Todd never lost his courage or faltered in his duty. His character and medical skill were among the town's best assets in those days.

Gov. Treadwell's account of the epidemic contains this statement, viz.: "The attending physicians, Drs. Eli Todd and Solomon Everest, are worthy of much honor for their humane, painstaking and skillful services during the whole scene of distress."

In 1819 Dr. Todd removed to Hartford. Here he spent the remainder of his life, engaging in private practice for a few years and subsequently serving as Physician to the Retreat.

He was President of the Connecticut Medical Society in 1827 and 1828, declining that honor in 1829. As a member of



important committees his name frequently appears on the Society records.

"He was a man of rare mental endowments. His judgment was profound, clear and discriminating; his apprehension remarkably quick; his memory strongly retentive, his imagination and fancy brilliant and ever awake. His tastes were delicate and refined, the source of much enjoyment to himself and much pleasure to others. His conversational powers were uncommon. Though usually affable, and often inclined to sprightfulness and gayety in his intercourse with others, yet his mind was naturally of a highly philosophical and speculative turn."

"On occasions when the subject required or admitted of it, he would give utterance to his sentiments and feelings in a style vivid, bold, and figurative; abounding in striking imagery, interesting and picturesque descriptions or narratives, and lively sallies of wit and humor. No one on such occasions could be long in his presence without being sensible of, or paying homage to, the vigor of his understanding and the brilliancy of his imagination. But while his rare intellectual powers inspired sentiments of respect and admiration, his moral and social qualities, the attributes of his heart, secured to him the strongest attachments." "He possesses a mountain of benevolence," was the verdict of Spurzheim, the famous phrenologist, after making a personal examination of Dr. Todd. "Many who were his patients can testify to his kind-hearted sympathy in the sick-room, to the unwearied assiduity with which he watched at the bedside of the sick, to his anxious solicitude to devise and adopt every possible measure for their relief, and to the affectionate language and manner with which he aimed to allay their sense of distress when it could not be at once removed."

"In his intercourse with society, his manners and general deportment were unusually courteous and gentle; he was ever frank, open-hearted and sincere; exhibited a high sense of honor, always despising what was mean and disingenuous, and ever attentive to all the decorums of time, place, and character. Although he aimed, and with almost uniform success, to avoid giving offense, yet he was fearless and independent in express-



ing his sentiments and pursuing the line of conduct he chose to follow."

The Connecticut Retreat for the Insane was opened for the reception of patients in January, 1824. The public had come to expect grand results from its treatment of the insane. There prevailed a widespread general interest concerning it; and faith in its success, strong from the first, was reassured when Dr. Todd assumed official charge. Time demonstrated the fact that such faith was well grounded. That his management of the Retreat was successful and wholly satisfactory to its patrons, his medical brethren and the general public, is certified by the annual reports of its operations and the recorded opinions of various authorities. Dr. Amariah Brigham, Superintendent of the Retreat from 1839 to 1842, wrote that "Dr. Todd was eminently fitted for the 'moral treatment' of the insane, in which he practically excelled. His great merit, we conceive, is his having zealously embraced and practically introduced into this country, and made extensively known here, the moral and medical treatment recommended by Pinel, Tuke and Willis. He made the law of kindness the all-pervading power of the moral discipline of the Retreat, and required unvaried gentleness and respect to be manifest toward the inmates of the institution by every member belonging to it. He early discountenanced depletion, particularly bleeding, in insanity, insisted upon the necessity of generous diet, and recommended a frequent resort to tonics, in the medical treatment of insanity. This course of treatment, though it had been recommended by the best writers on insanity in Europe, had not, to much extent, been resorted to in this country previous to the time of Todd, and it was so contrary to that recommended by Dr. Rush that it required considerable boldness and much address to introduce it, and make it popular in this country; and this Dr. Todd accomplished."

At the corner-stone-laying of the Connecticut Hospital for the Insane, Dr. Earle said: "Let it ever be remembered to the honor of Connecticut that she furnished one of the first prominent opponents to blood-letting,—this ultra-heroic, this war-like, treatment. Dr. Todd, the first Superintendent of the Retreat,

boldly resisted medical opinions of the day, at a time when such resistance required a strong will, founded upon a sense of duty and a moral courage worthy of all commendation."

Three or four years after Dr. Todd opened the Retreat, it was visited by Capt. Basil Hall of the Royal Navy, who spent the years 1827 and 1828 in America, and subsequently published an account of his travels, with descriptions of many interesting things which attracted his attention. He writes:

"Dr. Todd, the eminent and kind physician in charge of the Retreat, gladly communicated his plans and showed us over every part of the noble establishment—a model, I venture to say, from which any country might take instructions. . . . Dr. Todd's method is to treat every insane patient as if he were a reasonable being. . . . When a patient is brought to the Retreat, the physician converses with him freely, and without attempting to deceive states all that is known of his case; explains that he is brought there for the purpose of being cured of a disease which happens to affect his mind as it might have done his body. . . . That he will have every possible freedom consistent with his own safety and the comfort of his friends. The same cordial unreserved system is present from first to last."

Capt. Hall incorporated in his published comments upon the Retreat the following statements, which he copied from a report by the visiting physicians and which was probably written by Dr. Woodward:

"Of the moral and medical management of the patients the committee are bound to give a brief detail, as the general plan of treatment adopted at this institution is more or less original, and different in some material respects from that pursued in any other hospital. In respect to the moral and intellectual treatment, the first business of a physician is to gain the patient's entire confidence. With this in view he is treated with the greatest kindness, however violent his conduct may be,—is allowed all the liberty his case admits of, and is made to understand, if he is still capable of reflection, that, so far from having arrived at a mad-house where he is to be confined, he has come to a pleasant and cheerful residence where all kindness and attention will be shown him, and where every means will be used for his recovery to health. In no case is deception employed or allowed; on the contrary, the greatest frankness as well as kindness form a part of the moral treatment. His case is explained to him, and he is made to understand, as far as possible, the reason why the treatment to which he is being subjected has become necessary.

"By this course of intellectual management it has been found, as a matter of experience at our institution, that patients who had always been raving when confined without being told the reason, and refractory when commanded instead of entreated, soon became peaceable and docile.

"This course of treatment, of course, does not apply to idiots, or those laboring under low grades of mental imbecility, but it is applicable to every other class of mental disorder.

"In respect to the medical and dietetic treatment, it also varies essentially in the main from the course adopted at other hospitals.

"Formerly patients laboring under a mental disease were largely medicated, chiefly by emetic, cathartics, and bleeding. At the present time, this mode of treatment has given place to intellectual and dietetic regimen in some European hospitals. The physician of our hospital has introduced a course of practice differing from both these, but partaking more or less of each. He combines medical and moral treatment, founded upon the principles of mental philosophy and physiology. In one class of cases moral, and in another medical, treatment becomes the paramount remedies; but in each class of cases both are combined. The proportion of cures which have been effected at our Retreat has satisfied your committee that the mode of treatment there adopted is highly salutary and proper."

Dr. Pliny Earle has observed that while the visiting physicians' original report attracted little notice when it appeared as a part of the annual Retreat report, when it was thus publicly "recognized and endorsed" by a prominent British naval officer, it "became worthy of recognition on this side of the Atlantic. The newspapers took it up and sent it through the length and breadth of the land, and in this way, whatever a few physicians might have learned from the report itself, the people at large received their first impression that insanity is largely curable."

In the early part of the nineteenth century, optimistic ideas respecting the curability of insanity prevailed. Dr. Burrows of London published a book in 1820, in which he claimed that "of all insane cases treated by him in hospital and private practice, the proportion of recoveries was 81 in 100—recent cases 91 in 100, and of chronic cases, 35 in 100. Dr. Willis and other specialists in mental disease claimed like success in their practice.

No doubt they stated facts, but in those days the term "insanity" was limited in its application to the more obvious departures from the normal, in mental states. Asylums had

been provided to accommodate only the more pronounced cases of insanity, the violent or deeply depressed patients—those classes which will always show a high percentage of recovery.

Moreover, in those days the standards which signified recovery were not sufficiently exacting to preclude errors. Statements published in the early Retreat reports simply confirmed current theories on this subject. In the first seven years of its operation, the Hartford Retreat received 147 recent cases and discharged as recovered 132 of them, or about nine-tenths. And yet Dr. Todd was strictly honest in his returns. His sincerity cannot be doubted, since he annually published an epitome of his records, giving the consecutive number and the initials of each patient, the diagnosis, duration of attack, time under treatment and condition on discharge.

Those early authorities had to depend upon available statistics, and chiefly those representing their own experience, which was too limited to warrant conclusions as to the general curability of insanity; and their claims never bore that import. They always proclaimed that their recovery rates were computed upon the early treatment of acute cases.

While Tuke's genius for conciliatory tactics and captivating kindness were phenomenal, patients were occasionally subjected to mild forms of mechanical restraint in the York Retreat, and the same must be said concerning the Hartford Retreat. The logical consummation of Tuke's humane theories—"non-restraint"—was not worked out and advocated until about twenty years after the Hartford Retreat was established.

When hospitals for the insane were so small that the Superintendent could spend much time with any one patient when really necessary; and such men as Tuke and Todd presided over such hospitals—there was no necessity for strict injunctions on this score. Their tactful approach and soothing way seldom failed to control the insane, and the infrequent employment of restraint, under such conditions, generated no far-reaching, vicious influence. But when the number of patients in individual hospitals became so large that the presiding administrator could not keep in personal touch with all the circumstances, and was

obliged to delegate authority to subordinates, and trust employees to render the necessary service to refractory patients, the necessity for explicit and strict rules on such matters became urgent, if the insane patients are always to receive kind treatment.

Todd plainly saw that Tuke's methods of "moral treatment" were new and rational applications of natural law to the treatment in insanity,—wise and ingenious attempts to regulate by interesting employment the mental and physical ebullitions of the insane, which naturally augment when suppression by arbitrary force is attempted.

He apprehended what the judicious, systematic application of such humane measures would signify to the insane and their friends. At once the far-reaching possibilities of "moral treatment" of the insane enlisted his sense of justice, and became his working ideal.

His subsequent life-work with the insane demonstrated that he had divined the true essence of Quakerism. In those days, for a scientific physician, such as Dr. Todd was, to grasp at the promise of "moral treatment" to benefit the insane; to study and master its application conjointly with his superior medical skill, were rare exhibitions of altruistic nobility.

Just as other belated reforms have failed to crystallize and acquire individual potency until exploited by some single-minded enthusiast, so it required the benevolent genius of a layman, like William Tuke, to sufficiently accentuate the importance and dignity of "moral treatment" for the insane so that it never again could be ignored.

But Todd's prompt and complete recognition of this new principle of insane hospital practice was exceptional. Eminently humane and important as was this reform, it advanced slowly in England, and forty years after Todd addressed the Medical Society and the State Legislature upon the matter some persons in Connecticut were still chained.

It required a modest philanthropic spirit in an educated physician to openly patronize a layman's conception of the proper treatment of insanity. It required the broadest sort of a scientist to admit that the supreme interests of the insane depended more



upon scientific diversion, sympathy and scientific mental stimulus, than upon the scientific administration of drugs.

And, furthermore, it required a philosopher to associate these dissimilar but complementary agencies in a symmetrical and practical policy of hospital management. Yet the peerless Todd was equal to any and all such demands upon mental and moral resources. He unhesitatingly formulated his scheme of action and diligently pursued it as long as he lived. His system was not a code of rules for subordinates to enforce; not austere, remote authority; but personal devotion and painstaking labor with his individual patients,—that method of true leadership in a good cause which always commands respect and insures success.

While those associated with him, and those competent to judge, were enthusiastic respecting his proficiency, his attainments in the practice of "moral treatment" never fully satisfied his personal ambitions in that form of medical art.

After his death the Retreat managers, in estimating his worth, stated, "To revise and improve, or perhaps it may more properly be said, to devise and establish a more perfect system (of moral treatment) was among the latest and most ardent desires of our late, much respected and lamented physician."

While Dr. Todd had decided convictions and was tenacious of his opinions, he was firm but never aggressive. In fact he must have been a very modest man. The universal esteem in which he was held, and the many recorded tributes to his nobility of character, imply as much. This conclusion is reinforced by the fact that he never wrote for publication except when plain duty compelled. Besides his reports to the Medical Society, the Legislature, and a few Retreat annuals, nothing from his pen has been preserved in book or journal.

And such regrettable silence, in a man occupying a prominent public position, engaged in pioneer work of great import to society, and possessed of conspicuous natural gifts, in respect of power of observation and the arts of rhetoric, argues a sensitive, retiring nature. In short, all that he did write and all that was written about him serve to illustrate the conviction



that in Todd's personality egoism was delightfully obscured by magnanimous altruism.

His profound sympathy for the insane which stamped all his views and conduct may have had some relation to the presentiment, which no doubt haunted him, that the integrity of his own mind was not well assured, as two members of his immediate family had been insane.

Towards the end of his life he became deeply interested in the subject of inebriety and its treatment. As chairman of a committee appointed to consider these questions, he made a report to the State Medical Society in 1830. That report discusses the pitiable condition of the habitual drunkard, his sufferings, and the miseries his intemperate habits entail upon others. It gives an estimate of the financial burdens which intemperance imposes upon the family, the community, and the State. It considers the necessity for legal restraints and penalties, but recognizes the inadequacy of fines and imprisonments for alcoholic excesses. The physical, mental, and moral conditions of the inebriate are analyzed to exhibit his broken-down standards of health, and to show that such moral weaklings ought to be subjected to an "enlightened system of physical and moral treatment" which can be properly enforced only in an institution designed especially for their custody, treatment, and reformation. The Medical Society, influenced by this report, adopted Dr. Todd's views, and "Resolved, that in the opinion of this convention, it is expedient to establish in this State an asylum for the reformation of inebriates."

Doubtless the medical men intended to follow the methods by which the Retreat had been founded and financed. A central committee, which embraced Drs. Todd, Woodward and Sumner, was elected to advance the enterprise, and a sub-committee, for correspondence and coöperation, consisting of two members from each county society, was also appointed. Had such an institution then materialized, its operations, as projected by Dr. Todd, would have accomplished much good, and probably would have served as an object lesson to settle public opinion upon this still perplexing question.

Just how far the medical committee proceeded is not certain. But at that time Dr. Todd was a sick man. Angina pectoris subsequently developed and he survived this appointment only three years.

Meanwhile, Dr. Woodward had left Connecticut to superintend the Worcester State Hospital in Massachusetts. Thereupon the Inebriate Hospital proposition languished in Connecticut until the late Dr. George B. Hawley espoused the cause, some forty years afterwards.

Dr. Todd's hospital management was widely appreciated. An offer of the superintendency of the Bloomingdale Hospital in New York was made to him. And again a like offer to take charge of the Worcester State Hospital was also urged upon him. Notwithstanding he would have received a higher salary at either of the other institutions, he remained loyally attached to the Hartford Retreat.

From all accounts, written estimates of his character and ability, and verbal traditions which are still repeated in this community, it must be admitted that Dr. Todd was a remarkable man; possessing a charming personality, with ready command of a well-balanced, richly-endowed and brilliant mind.

In cultured social circles he was conspicuous for his breadth of knowledge, his grace of speech, his wit and versatility; yet he chose to exercise those rare conversational gifts in humble service to the afflicted insane. His unusual oratorical powers, which enabled him to mould the thoughts and feelings of a public audience;—the skillful argument, the adroit suggestion, the power of sincerity and the command of pathos,—were voluntarily employed in cheering the despondent, in soothing the irritable, endeavoring to dissipate delusions and comforting everyone within his reach.

And such was his daily occupation at the Retreat for nearly ten years, till his brilliant and useful career was terminated by death, in November, 1833.

His medical friend, Thomson of Farmington, wrote of him as follows, viz.: "In the managing of cases of insanity, perhaps no man has ever been more successful. The Retreat under his

superintendence was raised to a rank second to none, perhaps superior to any other similar institution on this continent."

The medical visitors in their final tribute say: "The past year has been an era that will long be remembered,—the sickness and death of him, to whom under Providence, may be assigned, perhaps more than to any other individual, the high honor of originating the design of founding this institution. The united testimony of patients and friends constitute a memorial of his kindness, and the success which has crowned his exertions will be an enduring monument to his skill and professional work."

His intimate and appreciative friend, Dr. Woodward, published the following summary, viz.: "He took the Retreat in its infancy, without patients, and almost without resources, at a time when public sentiment was far from being favorable to such institutions. He adopted a course of management peculiarly his own, carried it into successful operation, and gave to the Retreat a character for the comfort and care of its members, not surpassed in this or any other country. Here, too, he raised himself a name for intelligence and philanthropy as imperishable as the cause of humanity."

## The Treatment of Chronic Suppurative Lachrymal Disease.

E. TERRY SMITH, M.D., HARTFORD.

Ophthalmology is supposed to be the oldest specialty in medicine, and the first book on ophthalmology was written one thousand years before the time of Hippocrates and fifteen centuries before Christ.

This first book on ophthalmology was republished in Leipsic under the title "Papyrus Augen Krankheiten" von Georg Ebers. Among the diseases mentioned in it was tear-eyes (epiphora), for which the remedies were incense, boiled papyrus, acacia gum, antimony, and water. Another remedy for this disease consisted of a mixture of corn, incense, verdigris, head of papyrus plant (cooked), resin of acanthus, onions and water, of each one part.

This prescription was used as an eye drop and was probably as useful as the suggestion of Pope John XXI, the ophthalmologist, that exorcisms should be employed in the treatment of lachrymal fistula, on the principle advanced by Zanbrini, that anything so intractable must be the work of the devil, and could only be improved by removing the cause of the trouble. Pope John XXI was killed in May, 1277.

The treatment of diseases of the lachrymal apparatus by the so-called traveling oculist of the fifteenth century was probably not much more successful. Dr. Spaulding depicts his invasion of a town as follows:—

As oculists were at that time supposed to receive the best education in the East, our hero would hail from Constantinople, for example, and under the name of Jacomo the Great would enter a town, followed by the blind whom he had picked up along the road. As the story goes, some one once asked one of these quacks why he allowed those blind men to follow him. "Oh, to be a warning; for if they had only used this precious

eye salve of mine, they would never have become blind." A scaffolding was set up and covered with gorgeous rugs, while around were distributed pots of salve, rolls of plaster, poultices, apparatus for conjurations, and amulets to exorcise witchcraft.

At proper intervals tables were placed covered with tongs, hammers, uncouth scissors, enormous knives and saws, all made to create astonishment rather than to be used in operations on the eye. Some of these scissors were ten inches long, and there were "cataract needles big enough to kill a calf or sew a pair of shoes." At the foot of the steps leading to the scaffolding stood a clown who amused the bystanders with jokes or attracted those passing by repeated blasts of a trumpet. Sometimes he acted as assistant, but only to steady the arms of the operator. But this position becomes important when we recollect that the oculists insisted that the couching needle should be held steadily in the eye for fifteen minutes (or as long as it takes to say three paternosters and one miserere or five Ave Marias) in order to keep the lens in its new position in the vitreous. During minor operations, the clown tried to relieve the patient's sufferings by fun and grimaces.

The last of the traveling oculists and probably the best known of them all was John Taylor, who flourished between 1750 and 1760. A word about Taylor, whose picture, through the courtesy of Dr. Hallock, I am able to present. His only contribution to science was the suggestion of division of muscles of the eye for strabismus, although he never performed the operation.

When Taylor had chosen a place for public exhibition of himself, the paper for weeks before the time would be filled with notices of his approaching visit and certificates of cures. When popular curiosity had been raised to the needful pitch, Taylor would enter a town in a coach which was covered with gorgeously colored pictures of those diseases of the eye with which he was familiar. The newspapers would then announce his arrival and invite all to attend "the Great Taylor's lecture on the form, functions and diseases of the eye." Thus a bait was first thrown to the people, and then the quack would proceed to plunder their purses. First of all he would treat cases requir-

ing lotions or salves, then he would operate, and then leave his patients to their fate.

With the discovery of the ophthalmoscope in 1851 by Helmholtz the diagnosis and treatment of eye diseases received a great impetus.

Bowman was the first to scientifically treat lachrymal affections.

It may be well to refresh our memories in regard to the anatomy of the lachrymal passages. They consist of the puncta lachrymalia, the canaliculi, the lachrymal sac, and the nasal duct.

The puncta lachrymalia lie near the posterior border of the free margin of the lid, about 6 mm. from the inner canthus. Each lid has one punctum and one canaliculus. The punctum is situated upon a slight elevation, the papilla lachrymalis, which is larger in elderly people.

The canaliculus passes from the punctum to the lachrymal sac, being first directed vertically for 1 or 2 mm., then horizontally for 6 or 7 mm.

The canaliculi usually open separately through the outer wall of the lachrymal sac. The lachrymal sac lies in the lachrymal fossa formed by the lachrymal bone. When distended it is about 15 mm. long vertically and 5-10 mm. wide. The fundus extends slightly above the level of the inner tarsal ligament.

The sac is surrounded by fibres of the orbicularis. The lower end narrows as it opens into the nasal duct. The nasal duct, varying much in size (12-24 mm. long) (3-6 mm. in diameter), passes downward and slightly outward and backward, bounded by the superior maxilla and inferior turbinate, to open at the anterior part of the outer wall of the inferior meatus of the nose.

The lachrymal secretion is a slightly alkaline fluid containing sodium chloride as its chief constituent.

The Talmud speaks of six kinds of tears, three of which are beautiful and useful, and three rather injurious.

Tears caused by smoke and defecating (due to diseases of the rectum) and, above all, tears caused by the loss of a dear child are injurious while those caused by medication and collyria are "nice." The most beautiful and useful are those caused by laughter.



The ordinary amount secreted is just sufficient to moisten the eye ball and is lost by evaporation. Epiphora does not result from extirpation of the lachrymal sac, except in the presence of peripheral stimuli to increase secretion.

Theobald describes the mechanism of the drainage of the conjunctival sac as follows: "In the first place, the act of winking carries the tears from the general conjunctival surface of the eye towards the canaliculi, causing them to collect in the neighborhood of the puncta; in the second place, it is probable that the pull which the orbicularis muscle, in contracting, exerts upon the internal palpebral ligament is, through the intimate connection existing between the latter and the anterior wall of the lachrymal sac, extended to the sac itself, and that the effect of this is to produce a sort of suction-pump action, which draws the tears through the puncta and the canaliculi into the sac. The tears pass through the duct by reason of gravity, and their descent is facilitated by the elasticity of the lachrymal sac, which causes it, when distended by tears, to contract upon its contents."

In speaking of the treatment of chronic purulent lachrymal disease, Wood, in his latest book on operation on the eye, says: "Syringing, probing, and the employment of either hard or flexible styles are now classic treatment. When the disease resists these variously modified methods, extirpation of the sac, a difficult and tedious operation, is the surgeon's last resource."

To me the destruction of the canaliculus always seems poor surgery. For if the tears are to be drawn into the tear sac by suction, this function of the sac would certainly be lost by slitting the canaliculus.

Since 1908 it has always been our practice in all cases of chronic dacryocystitis, after persistent routine treatment (namely probing with small probes that can be passed without slitting the canaliculus, washing out the sac with antiseptic solutions, and correcting any nasal difficulty that may be a contributing cause), for a moderate period of time, to extirpate the sac.

This operation was first performed by Platner in 1724, and Rosas in 1830 attempted to revive the operation. In medical

literature prior to 1868 the operation was mentioned by Arlt and de Wicker, and was performed by Mooren although he did not recommend it. Berlin reintroduced it in 1868, but it is due to the Vienna School and Axenfeld of Freiburg that the operation is recognized as the best method of treatment for these cases. The method of Dr. Meller of Vienna is described as follows in Fox's Text Book on Ophthalmology, and is the method we employ, Dr. Fox and myself having done some work on this condition in Vienna some years ago.

"This operation is always done under local anesthesia to avoid the local congestion and subsequent hemorrhage which obscures the field of operation when narcosis is induced. A one per cent. solution of cocaine in a Pravaz syringe to which one division of adrenalin has been added, is injected in the following manner. The needle is inserted over the anterior lachrymal crest and directed upward and slightly inward subcutaneously, for about one-third of an inch, and a few drops of the solution injected. The syringe is withdrawn and the needle is plunged to the bone just below the middle part of the canthal ligament and is directed downward, and the second third of the anesthetic mixture is used, thus cocainizing the lower part of the sac. The same procedure follows above the ligament, the needle being directed slightly upward. The part is gently massaged for a couple of minutes and then the operation may be started with impunity, for when properly administered nearly complete anesthesia exists.

"With an eye scalpel the first incision is made, cutting only through the skin, starting at a point just above the middle part of the canthal ligament and running downward and slightly outward over the crest. This bony prominence forms the chief landmark during the operation, and its location must be constantly borne in mind. The edges of the skin wound are now slightly undermined and a Meller speculum is inserted to hold them apart. The floor of the opening is formed of the delicate superficial fascia, and this is easily divided with the point of a scissors. A toothed thumb forceps and a light scissors curved on the flat are now taken up by the operator and the muscle fibres of the orbicularis separated easily by blunt dissection, as these fibres follow the line of the incision. During this period, an attentive assistant keeps the field of operation free from blood, using an anatomical forceps and a strip of gauze for tamponading. The opening is now quite deep in many cases, but, below, the tough deep fascia can be plainly made out. Just over the crista a snip is made into this fascia with the point of the scissors, and then by inserting one blade into the opening a straight incision can be continued up to the canthal ligament. This ligament

may now be severed to enlarge the field, but when done earlier there is a tendency toward hemorrhage from the large veins lying just above. Between the edges of the split fascia lies the pink sac. The fascia is grasped in the forceps to the outer side, and with closed scissors the wall of the sac is gently dissected away from the orbital fascia, care being taken to avoid penetrating this, lest a hernia of fat should contract the view and even lead to subsequent cellulitis. The nasal edge of the fascia is then fixed, and with the scissors the inner wall of the sac is freed from the periosteum of the lacrymal bone. The canaliculi are divided close to the sac, and the inner surface is easily freed by the blunt dissection close to the bone. The assistant now retracts the upper angle of the wound by means of a small sharp double hook. The body of the sac is firmly grasped with the forceps and the vault dissected loose with a few cuts of the scissors, keeping close to the bone; and now only the connection with the lachrymal duct remains. With the sac between the blades, the scissors is inserted into the duct and the cut made as low down as possible.

"The sac comes away and a sound is passed through it to determine whether it is intact or not, and in ninety-five per cent of the cases a gratifying result is realized. A large Bowman sound is passed into the duct through the wound opening, and this is followed by a sharp curette with which the entire diseased mucous membrane is extirpated, the cavity is washed with 1-10,000 bichloride solution and dried with gauze. The skin margins are made tense by traction upon sharp hooks in each angle and three silk sutures bring the edges together, good apposition being most desirable, for in such a case the scar is never visible. A piece of gauze with vaseline is laid above, and a small roll of iodoform gauze is used to exert pressure over the area, thus obliterating any of the dead spaces. A compression bandage is used, and the patient goes home, to return in two days provided there are no symptoms. Sutures are removed upon the third day. A little dusting powder, preferably xeroform, and the case is completed. Uninterrupted recovery in a week."

I will show a few photographs of this condition before and after operation.

EXHIBIT No. 1.—Persistent chronic dacryocystitis with distention of lachrymal sac.

This case was operated on in 1908 and the sac removed without rupturing. I have here the still distended sac. The case made the usual uninterrupted recovery.

EXHIBIT No. 2.—Showing photograph taken ten days after double extirpation of lachrymal sacs.

EXHIBIT No. 3.—Case before operation and four days after operation.

EXHIBIT No. 4.—Plate showing acute dacryocystitis and also chronic dacryocystitis with distention of lachrymal sac.

These cases formerly constituted a legacy that was passed down from one oculist to another. It was a "*rara avis*" that recovered. Many eyes were lost as the result of ulcer of the cornea, which in the presence of chronic dacryocystitis becomes tenfold more malignant.

Operations on the eyeball were contra-indicated on account of the danger of infection.

The principal objection to the operation, the danger of epiphora, does not in my experience prove to be substantiated, and on account of the uniformly good results we have obtained, we do not allow these cases to drag along month after month and year after year as formerly, but treat them radically unless there is some important contra-indication.

## DISCUSSION.

DR. E. TERRY SMITH (Hartford, after having read his paper): Here is a patient operated on six days ago, showing the usual course of the disease. She is one of the pupil nurses of the Hartford Hospital. There is scarcely a perceptible scar, and she has had practically no discomfort since the operation. She had had a suppurating sac for two years. She has some discomfort on the other side, and thinks that she had better have that sac taken out on that side also.

THE PRESIDENT: The discussion on Dr. E. Terry Smith's paper will be opened by Dr. Dorland Smith of Bridgeport.

DR. DORLAND SMITH (Bridgeport): I quite agree with Dr. E. Terry Smith that slitting of the canaliculus is an unsurgical procedure; but we have to do something to enlarge the punctum in order to use sufficiently large probes. For some years I have been following a method devised by my partner, Dr. Frederick M. Wilson, which avoids slitting of the canaliculus and so does not destroy the pumping action of the lids, but which admits of using quite large probes, even up to No. 16 Theobald. The punctum is cut with sharp-pointed scissors straight back from and perpendicular to the edge of the lid on its inner surface, as far as the perpendicular part of the canaliculus goes. The punctum is

now the full size of the canaliculus, which allows a large probe to be put into the sac. As the probe is slowly turned up, the lid slides over easily with it, and is held there by the probe while the latter goes into the nose.

Probing and excision of the sac are the only practical measures for the relief of these chronic lachrymal conditions. Probing gives the ideal result. It is somewhat painful and is apt to take a long, a very long time. Excision of the sac, on the contrary, is a short way out of our difficulties. Its result is not ideal, but is much better than the condition for which it is done. I have excised the sac in some thirty cases, and so far the patients have not complained of the running over of tears, unless out much in the wind. If patients complain of this difficulty, excision of the lower part of the lachrymal gland is easily done and effectual. The scar remaining after excision is negligible; it is often hardly noticeable.

Excision of the sac is one way to get rid of the long, tedious lachrymal cases, though it does not give quite the ideal result. As to the choice between it and probing, my own opinion is that, in the ordinary case, if both the doctor and the patient have the courage for probing, probe by all means to the end of the chapter; but if either lacks the courage, excise the sac.

THE PRESIDENT: Dr. Arthur N. Alling of New Haven is on the programme as the next speaker, but he is absent. Is there anyone else who wishes to discuss the paper?

DR. WILLIAM H. CARMALT (New Haven): I must say that I did, for a great many years, the things that my two students now tell me I was all wrong in doing; and I am perfectly willing to be quoted now. The operation that Dr. Smith has described is probably the best one for the condition. There is, however, one point that I rise to speak of, and that is the fact that the pus from dacryocystitis never, so far as I have observed, produces a suppurative keratitis. I have never seen a case of this associated with these cases of suppurative dacryocystitis. I cannot now say from memory that in no case was there a lesion of the cornea, but it is a fact, and I recall instances where operations for cataract were done in spite of the presence of suppurative dacryocystitis with a favorable outcome. This was years before we knew of the microbe origin of pus, and I remember the discussions, at the New York Eye and Ear Infirmary, with which I was then connected, as to the danger of the incision suppurating. To be sure we always hesitated and treated the case, trying to do away with suppuration, but after a time, our patience having become exhausted, we took the risk and operated. I would dare to do it now!

THE PRESIDENT: Does anyone else wish to remark upon the paper? If not, I will call upon Dr. Smith to close the discussion.

DR. E. TERRY SMITH (Hartford): I have very little to say except that it is a peculiar thing in this country that *ulcus serpens* is not a common condition, while in Europe it is frequently found, and is most often caused by chronic dacryocystitis. Thousands of eyes are saved yearly by extirpation of the lachrymal sac.



SURGICAL PAPERS.



## Pseudo-Ileus due to Intestinal Nerve Impulse Disturbances: Enterospasm.

PATRICK J. CASSIDY, M.D., NORWICH.

Each year there are in the State of Connecticut approximately one hundred deaths due to intestinal obstruction, in which the obstructive agency is other than external strangulation or obstruction. At least this is so if one may use as a basis for judgment reported deaths from this cause as collected in the United States census for 1910. In the year 1900 there was a death rate of ninety-nine, and the death rate from this cause varied but little in each succeeding year. In 1911 there were one hundred and fourteen deaths from intestinal obstruction out of a total death list of 17,554 in this State. This death rate is an item of academic interest, but it gives us no clue as to the percentage rate of deaths or recoveries. That this percentage rate is high may be accepted as a fact, if one takes into consideration the statistics of one or two of our State's hospitals. During the three years ending May 1, 1912, the death rate from cases of intestinal obstruction due to an internal obstructive agency other than hernia in two hospitals, in different sections of the State, was 80 per cent. This enormous death rate is perhaps due to the fact of late operative interference, necessitated by hesitancy in diagnosis or delay, brought about by too long a period of treatment by purely medical means. In other words, it would seem that the most advisable course to pursue in the treatment of a case presenting the cardinal symptoms of intestinal obstruction, which are: (a) Pain, severe, constant and constantly increasing, or of an increasingly intensified paroxysmal variety; (b) Vomiting, especially the uncontrollable or fæcal type; (c) Constipation; (d) Collapse or general constitutional symptoms,—is to insist upon early operative interference. This would be the proper view to take of the treatment of intestinal obstruction, always provided that there were only the mechanical type of obstructive agency.

But under the name of intestinal obstruction, cases must be included in which, although there is distinct cessation of the onward passage of the intestinal contents in the normal direction from the stomach to anus, there is no mechanical obstruction demonstrable, the causative factor being some functional fault in the intestinal muscularis. Still, these cases may, and often do, present all the symptoms of the mechanically caused obstruction, such as paroxysmal pain, vomiting, meteorism, constitutional disturbance and intestinal content stasis; all these even to an extreme degree. The vast majority of the extreme cases of this type are those of adynamic pseudo ileus, following some abdominal operation which involved rather prolonged exposure of or handling of intestines. Often enough, however, one meets with cases which present, primarily, all of the classical symptoms of mechanical obstruction, die without operation, or upon operation, present an intestinal tract free from any kinks, twists, hernia, bands or intussusception. Such cases are to be found as of two groups, one a group of the larger size, wherein the intestinal muscularis is apparently not functioning, this abeyance of the normal peristaltic wave being due to what may be termed for the present a paralysis of the circular muscle fibres. Sir Frederick Treves in the Jacksonian Prize Essay of 1883, written on the subject of intestinal obstruction, a most complete treatise upon this condition in all its aspects and varieties, discusses under a sub-heading, "The various affections that have been most frequently confused with cases of obstruction of the bowels," the affections which he calls pseudo strangulation. He says: "There have been recorded from time to time certain cases when the patient has presented all the most conspicuous symptoms of internal strangulation, has died, and has exhibited at the autopsy an intestine entirely free from any mechanical obstruction." Further, he states that these cases are due mainly to paralysis of some segment of the intestine interfering with the peristaltic movements at a certain spot with a resultant constipation, which in its natural course may induce the symptoms of pain and vomiting. But the pain and vomiting must be considered to be due often to reflex nerve disturbance and are

thus, to a great extent, independent of the interruption of the peristaltic wave. In this connection, therefore, he suggests and adopts the classification of Henrot, published in Paris in 1865, which is a division of all cases of paralysis of the intestine leading to obstructive symptoms into three classes.

GROUP 1.—Direct paralysis of a segment of the gut due to changes in its walls. Under this head is included such cases as those in which a strangulated loop of intestine, as in a hernia, is released, yet the symptoms of strangulation continue. The patient dies and the autopsy reveals no signs of mechanical obstruction, and the peritoneum normal.

GROUP 2.—Indirect paralysis depending upon reflex nerve action. Under this head one would include such cases as of Littres' hernia, and cases of peritoneal adhesions or localized peritonitis, giving rise to reflex irritation of the sympathetic nerve ganglia or plexuses. Such a reflex disturbance could arise from influences or injuries entirely extra abdominal, always providing that the influence or injury may be communicated readily, even though indirectly, to the splanchnic trunks or the solar or celiac plexus.

GROUP 3.—Paralysis of the bowel as a feature in a general affection of the nervous system. Under this class may be grouped cases presenting the symptom complex of intestinal strangulation, which often occur in connection with hysteria, meningitis and the various intoxications. Even after the passage of thirty years, one cannot improve upon or scarcely enlarge upon this thorough and analytic description and classification of Henrot and Trevés, which may be said to have included in this grouping practically all sorts of the paretic pseudo ileus.

But there is a second group made up of cases, up to the present much more infrequently reported than those of the first group, in which the stasis is not due to a flaccid state of the intestinal muscularis, but rather to a spasm of the circular muscle fibres over a localized area of the gut, causing by this spasmodic and extreme contraction of these muscle bands an obstruction of the lumen of the bowel, more or less complete, depending upon the severity of the spasm. In these cases, if the spasm be of

sufficient force to cause narrowing of the lumen of the intestine to such an extreme degree as to cause obstruction of the intestinal flow, we are face to face, during the spasm, with an actual mechanical obstruction, the obstruction being an integral part of the body obstructed. The spasm of the musculature must be of extreme severity in these cases, for as McLean and Andries (1), in their experiments or artificially produced ileus, have shown, the constriction of the lumen of the intestine in dogs to the circumference of a small lead pencil, would not impede the onward passage of intestinal contents. Therefore, one would expect, in addition to mere mechanical obstruction, some organic changes in the intestinal wall, but such is not the fact. There have come under my observation two cases that seem to belong to this group of spastic ileus.

CASE I.—George O., aged thirty-four, first seen in February, 1907. Patient was thin, anæmic, and of highly nervous temperament. History was that three years before, he had had, after drinking some cold water while in a heated state, an attack of severe griping pains in the lower abdomen, which pains were spasmodic in character, and after the continuance of these pains for an interval of a little over an hour, patient had vomited and felt relieved. These attacks had recurred at intervals, until during the winter of 1906-1907 the patient had been having attacks at intervals of from eight to ten weeks, with symptoms likened to those of the present condition, namely: twelve hours before, the patient had been attacked by a seizure of pains in the abdomen, which pains were of a similar type to those described in his first attack, with the spasms increasing in severity and decreasing in intervals, until at the time of my arrival he was to all practical purposes in constant pain. He had been vomiting several hours, having emptied his stomach, vomiting at first bile and then a material having a fæcal odor. He declared that his bowels had moved freely not more than five hours before the seizure. Examination of the abdomen showed a scaphoid abdomen with a pronounced tumor-like mass about half way between the umbilicus and the left iliac spine, with faintly visible peristaltic movements, in the small intestine.

With the symptoms in mind, a diagnosis of intestinal obstruction, due perhaps to intussusception, was made, and for treatment, in order to relieve the pain, a hypodermic of three-eighths of a grain of morphine was given, and an enema of soap suds, Rochelle salts and molasses given. The probability of the necessity of an operation was suggested. The first enema being retained, after the expiration of one hour, the enema was



repeated, using a long rectal tube and passing this into the bowel as far as possible. This second enema was made of the same constituents as the former, and was returned with fecal particles and gas, with subsidence in the tumor mass, followed by relief of the symptoms. This man had several attacks, until during July, 1907, he had three attacks, the history of each being similar to that of my first call, with the distinctive points being the tumor mass, feculant vomiting, bloody stools before the pain, and response to enema after the administration of gradually increasing doses of morphine. It became the routine treatment to give morphine, and after the expiration of one or two hours, to use the enema. Patient steadily refused operative interference, although each attack had all appearances of being the cause of his exitus lethalis. But after a sudden recurrence during July, the patient said that if he ever had another attack, he would consent to operation. In August, 1907, he had two attacks and during the second attack was taken to the William W. Backus Hospital, and there prepared for operation. When he entered the hospital he was suffering from an attack. During the course of preparation, relief occurred, so that when on the operating table no tumor mass was observed. An exploratory incision in left rectus and exploration of intestines was made, but there could be made out no sign of any intestinal obstruction or change, save for a slight diminution in the calibre of the jejunum for a distance of about one foot. No further attempt at operative interference other than exploration was made. Incision was sewed up and the patient left the hospital the first week in September, 1907. Advice was given him apropos of food regime and exercise, with the result that the patient went almost four months without an attack. He died in February, 1910, having had five attacks from the time of operation.

CASE 2.—J. G., aged 30, under observation for some years owing to a mitral regurgitation with enlargement of the heart and frequent slight lapses in compensation, taken ill during March, 1909, with severe abdominal pains, vomiting, distention of abdomen and constipation. A diagnosis was made of acute intestinal obstruction with immediate operation required. He was removed to the William W. Backus Hospital and was there prepared for operation. The fact of his cardiac condition caused great hesitancy in entering the abdomen, so morphine, delay and then high enema was the procedure, with the result of relief of the obstruction. This man, during the time from the attack in March, 1909, until his death, during March, 1913, had very numerous attacks of a similar character, these attacks being always preceded by either an increased nervous condition or by over-exertion muscularly. These attacks also became of a continued character, i. e., a paroxysmal attack with the pain, vomiting and constipation would come on, be relieved, and after forty-eight hours of comfort, there would be a repetition of

the attack, matching up with the first in severity. In each of these paroxysms during the four years, one considered that the end of his life was at hand, but the use of the morphia with the after use of the enema appeared of avail in relief of the obstructive symptoms. Between attacks there was no apparent failure of normal intestinal functioning. This patient died very suddenly during March, 1913, his death being in no way dependent upon intestinal conditions, and no autopsy could be obtained.

To my mind, these cases are on all fours one with the other, so far as the abdominal symptoms went, save for the absence of any tumor mass in the second case, there being a more general distention. A point of similarity between the two individuals was the fact that both had apparent areas of consolidation in the left lung apices. They both presented the major symptoms of intestinal obstruction with constitutional symptoms to a very pronounced degree in case 1; but in case 2, the constitutional symptoms were not so terrifying. Clinically, therefore, these cases may be said to present all the symptoms of mechanical obstruction of the bowels due to extrinsic interference with the normal peristalsis, but the history of recurrent attacks might lead one to doubt the presence of a mechanical obstruction. Yet, however, the diagnosis in a terrifying case may not be cleared up except after operative interference. Hawkins (2) reports a series of cases of what he calls enterospasm, a motor neurosis. These cases were of a varied type, the first case giving a history of intermittent constipation with vomiting, abdominal pain and distention. These attacks were gradual in onset and continued over a long period. During one of these attacks, which lasted several weeks, Hawkins operated and found a contracted and bloodless section of the ileum, at which point there was absolutely no peristaltic action. During the manipulation of this portion of the gut, the circulation was partially restored and the contents of the bowel above could be forced through this erstwhile contracted portion. But before the operation was over, the blanching and spasmodic contraction of this same portion of the intestine was seen to take place again. No other obstruction or obstructive agency could be made out in the entire intestinal tract.

Another case reported by Hawkins was of totally different type. The patient, a girl, aged twelve, had a sudden attack of colic with symptoms of obstruction, was operated upon and no sign of the disease was found, but the small intestine was abnormally active in its peristaltic movements. Bruce Kelley (3) reports a case wherein a man presented all the symptoms of acute intestinal obstruction, was not operated upon owing to the fact of there being no surgeon to be secured, died, and a complete autopsy was performed, showing with the exception of a slight hyperæmia of the jejunum over an area containing in its canal several lumps of undigested material, that there was absolutely no pathology, or lesion, or obstruction in any part of the abdomen or abdominal viscera. Following upon these reports, there were reports from several British surgeons and some French and German, all reporting cases of similar type. Therefore, one must be of the opinion that enterospasm of sufficient severity to cause obstructive phenomena is not a totally rare occurrence, and is apparently becoming more and more frequent.

#### CAUSES.

Any consideration of the probable causes of these types of intestinal obstruction must needs lead first to the normal physiological intestinal content movement. These movements are due to the peristaltic wave of the intestinal wall, which is a series of successive constrictive actions of the inner circular muscular coat of the intestinal wall. This serial movement is normally in a downward direction, i. e., away from the stomach, and is slow. The mechanism of this peristaltic movement is, according to Bayliss and Starling (4), that of a complicated reflex through the intrinsic ganglia, the exciting cause of the reflex being some substance, usually food, passing through the gut. Also, that although the peristaltic movements continue after section of the extrinsic nerves even with an increased intensity, yet the application of cocaine or nicotine to the muscle wall will inhibit movement. A judgment based upon these findings

is therefore that the peristaltic motion is due to the impulses conveyed through the local nerve ganglia, Auerbach's plexus and Meissner's plexus, and that merely the activity of the intestinal movements is regulated through the extrinsic nerves. The extrinsic nerve supply of the intestines is of visceromotor fibres from the vagus and sympathetic nerve chain through the superior mesenteric plexus, which is the extension of the lower part of the solar and coeliac plexuses and right vagus, supplying the small intestine and the greater part of the large. The vagus fibres are to be considered as the actual motor nerves, yet it is thought that the vagi may carry inhibitory fibres as well. The sympathetic chain fibres, when stimulated, have an inhibitory action upon the movements, although some motor fibres may take this path. These sympathetic fibres have been shown to issue from the cord as medullated fibres, in the lower dorsal region, pass to the sympathetic nerves, thence to semilunar plexus, therefore are closely connected with the higher brain centers, which fact accounts for the reflex action of cerebral excitement upon the peristaltic movements.

The course of the vagi may be called hastily to mind. As you remember, both right and left vagi, entering the thoracic cavity, respectively upon the right and left sides of the cavity, pass down in the posterior mediastinum, entering this position at the root of the respective lungs, enter the abdominal cavity in accompaniment with the œsophagus, and in the abdominal cavity their fibres are distributed from the right vagus to the coeliac, splenic and left renal plexuses, and from the left to the anterior surface of the stomach and hepatic plexus.

Reasoning from their anatomical relationships, one might expect anatomic pathologic lesions of a marked type or extent in the thoracic cavity, such as consolidated areas in the root of either lung or aneurysmal growths, or a very much enlarged myocardium could result in quite a marked pressure upon the nerves or nerve in such a way that this might cause a difference in the normal nerve impulses, passing along the fibres which are directly connected with the solar plexus and in that way a consequent interference with the ordinary circular muscle

movements in the intestine. This is purely theoretical and has not been subjected to the test of experiment.

As is well known, emotional excitement may cause increased peristaltic movement with a consequent diarrhœa, and Rinné (5) relates two cases of chronic enterospasm due to emotional excitement, one a woman of forty-three of a constipated habit, presenting symptoms of intestinal obstruction with a palpable mass. These attacks occurred in the patient after she had indulged her appetite by eating heavily of highly seasoned meals. Owing to the frequent occurrence of these attacks, operation was advised and accepted. The operation showed an enterospasm of the small intestine but no other lesion. Following the operation there was entire relief from the symptoms excepting after emotional excitement, when there would be a return of the spasm which could now be relieved by opium and belladonna, although before the operation these medicines were used without benefit. Rosenfeld (6) in 1907 details a case of spastic ileus in a young lady, following a slight injury, with the symptoms of vomiting, pain and persistent failure of intestinal action, continuing for a period of twelve days, but with a good pulse and good general condition. In this case there was restoration of the expulsive action of the intestinal canal after the administration of large doses of belladonna extract. C. W. Dean (7) details a case of recurrent enterospasm in a highly nervous woman in which case four abdominal sections, including excision of the affected intestine, were performed in ten months with no permanent relief. Judging from these cases and from the fact that there is a large group of individuals suffering from intestinal neurosis manifested in the different forms of enterocolitis or in vaguely described enteralgias, and also owing to the fact that we meet occasionally in abdominal sections with small intestines that are extremely responsive to the manipulation by instruments or the touch of the pointed instruments, this response being shown by an extreme and rapid contraction of the muscle fibres in the neighborhood of the part irritated, in some cases sufficient to cause a very pronounced puckering of the intestinal wall;—with these cases considered one is led to believe in the conclusions



of Hawkins (8), that all cases of enterospasm are neurotic in type and that the amount of abdominal trouble varies with the mental state.

Cheinisse (9), after summing up the literature on the subject, arrives at the conclusion that enterospasm, far from being dynamic in nature, is caused in reality by an anatomic lesion, outside the intestine, but connected with the cœliac plexus. He bases his opinion principally upon the experimental work of Exner and Jager (10), who, induced by the fact of having seen a case of enterospasm in a patient in whom there was a tumor involving the cœliac plexus region, undertook experimental work upon cats and found that after the removal of the cœliac ganglia, an irritant stimulus, applied to the intestinal wall, produced a complete contraction of the intestine at that spot, due to the spasmodic action of the circular muscle fibres, and as a counter to this, the irritation of the intestinal wall in the same cats with the same irritant before removal of the ganglia produced no spasm. Therefore, they conclude that the cœliac ganglia contains fibres which inhibit a spasmodic action of the circular muscle fibres. Whether we believe with Hawkins that the condition is entirely adynamic pseudo-ileus due to hyper-sensitive nerve reflex, or whether we believe with Cheinisse that the neurotic idea is entirely wrong, and there must be an anatomic lesion which must involve the ganglia of solar plexus, yet there is to be borne in mind the salient fact that each and every case reported had one point in common, that is, a local irritant. In the two cases of my own, one operated upon and the other not, the vagus nerve could easily have been involved in the pathological condition in the left chests, and both men were highly neurotic. Although these men could not be classified as belonging to the great army of office men and head workers, and therefore, would not be, according to Hawkins, among the entero-neurotically inclined men, yet they were of the same temperamental variety as the ordinary neurotic office workers. In each of my cases, conditions were ameliorated by care in diet, if nervous excitement were avoided as well. The cases of enterospasm are unfortunate in that they logically should



be subjected to operation, presenting the symptoms, as they do, of intestinal obstruction. Logically, because the early operative interference in intestinal obstruction of mechanical type is attended by the greatest percentage of successes and the mortality increases alarmingly after the first twenty-four hours, but as shown, operative interference in enterospasm is of value for diagnosis only. The diagnosis made, however, medicinal treatment in subsequent attacks should be directed towards relief of the spasm and prevention of attacks in so far as possible.

According to Naunyn the percentage of recoveries in cases of intestinal obstruction operated on during the first twenty-four hours is 75 per cent., while after the first twenty-four hours it is 35 to 40 per cent., and decreasing from day to day. While this is a fact in actually diagnosed cases of mechanical intestinal obstruction, yet the same percentage does not necessarily hold true in cases of obstruction due to spasmodic contraction of the circular fibres alone, first of all because the same damage to the peritoneum with its resultant nerve shock is not present in the spasmodic ileus as in the mechanical obstruction. Also, the advent of peritonitis is not common in the spastic cases. Yet, however, there is possible an extreme degree of distention of the proximal bowel, with a consequent splanchnic ganglia pressure and diaphragmatic interference, in the spastic cases as well as in the mechanically obstructed cases. There is also, from the very nature of things, a cessation of the intestinal flow aborally, with the consequent absorption of toxic products, which absorption tends to produce death, especially since the majority of these enterospastic occlusions are in the ilium or higher up in the intestinal tract. Draper (11) in his experimental work upon intestinal occlusion, shows that death is more rapid the closer to the stomach the occlusion. All these things being true, operation is, under the extraordinary circumstances of complete and acute intestinal spastic occlusion, necessary, because no surgeon could feel justified in allowing the patient to continue with a condition of complete obstruction, or even of incomplete obstruction with alarming symptoms, over the long terms of days that might elapse before the use of medical measures

give relief, without making some attempt to relieve the obstruction. But great difficulties are interposed at any successful surgical interference outside of the fact of the cause being nonmechanical, as Wynne and Stürm (12) conclude that in cases of enterospasm there is an inordinate amount of shock following abdominal content manipulation. On the other hand, nonsurgical interference has not proven of great benefit in cases reported, the medicinal treatment perhaps relieving conditions temporarily, but with an early return.

#### CONCLUSIONS.

1. Enterospasm is a neurosis of the intestine associated with some systemic affection heightening the general neurotic condition.

2. The symptoms characterizing an attack may vary from simple constipation with pain and distention to the grade of the most pronounced symptoms of complete mechanical obstruction.

3. The attacks are usually recurrent although death may occur during the first onset.

4. Operative interference is advisable although it is of benefit only from point of view of diagnosis.

5. A positive diagnosis is beneficial to the patient in that proper precautions can be advised which may prevent too frequent future attacks.

6. A positive diagnosis is very difficult of attainment excepting post-operative or post-mortem.

7. The fact of an apparent increase in the number of enteroneurotic patients with spasmodic ileus.

8. The portions of intestine most frequently at fault are the jejunum (distal portion) and the ileum.

9. The doubt of a probable enterospasm must always be entertained in each case presenting symptoms of an internally caused intestinal obstruction.

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## DISCUSSION.

THE PRESIDENT: The discussion on this paper will be opened by Dr. Joseph M. Flint of New Haven.

DR. JOSEPH M. FLINT (New Haven): *Mr. President and Members of the Society:* I think that the experience that Dr. Cassidy has so interestingly related has probably fallen to the lot of every surgeon, and we are much indebted to him for his extremely enlightening discussion of this very obscure condition. I have nothing to add to his paper, except to emphasize one or two points that he has brought out.

I think that while we are perhaps entitled to recognize enterospasm among the causes of ileus, it would be unfortunate for us to allow the possibility of the existence of this condition to delay in any way the operative treatment of cases of real obstruction, owing to its mimicry by this pseudo-ileus. Perhaps some delay might be justifiable when there is a history of repeated attacks in a case of definite enteroneurosis, but cases of mechanical obstruction do occur, it must be remembered, in the same class of patients with exactly the same clinical history.

The etiology of the condition, which Dr. Cassidy has discussed, is one of great interest; and I think that if we consider for a moment some of the anatomical and physiological relationships that he has brought forth, we may perhaps have a clue to the cause of this condition. The intestinal nervous system is largely automatic, and lies between the muscular coats and in the submucosa and is composed of Meissner's and Auerbach plexuses. There are inhibitory nerves originating in the sympathetic system and passing to the intestine through the splanchnic nerve as well as a group of accelerator nerves that have their origin in the vagus. A case of enterospasm has been reported resulting from the pressure of a retroperitoneal tumor upon the coeliac plexus, thus cutting out the inhibitory actions of the sympathetic and allowing an unrestricted vagus influence which ends in spasm. Meltzer and Auer have produced a similar condition experimentally by section of the sympathetic and simultaneous stimulation of the vagus. This results at first in violent peristalsis and terminates in spasm.

The only value of an operation in enterospasm is for diagnosis in ruling out the possibility of a mechanical obstruction. Many cases have been treated successfully by extract of belladonna or atropin, which by paralyzing the hypertonic vagus, allows the peristaltic action to occur. We have had on our service two cases, both with typical clinical pictures of an acute obstruction. One was high up in the ileum and one in the transverse colon which was like a thick cord covered with small sacculations due to the firmly contracted circular musculature. Both cases recovered after the exploratory laparotomy and have been lost sight of.

It would be extremely interesting to have the full subsequent history of all cases of enterospasm owing to the fact that those of us who work in hospitals are apt to see them only during an acute attack.

THE PRESIDENT: The next person on the programme to discuss Dr. Cassidy's paper is Dr. Oliver C. Smith of Hartford.

DR. OLIVER C. SMITH (Hartford): The question of intestinal obstruction is of great importance to the general practitioner as well as the surgeon. I want to thank Dr. Cassidy for his excellent paper, bringing this matter again to our attention. I believe the cases of ileus that he has described, pseudo-adynamic or dynamic ileus caused by persistent contractions of the circular muscular fibers of the intestine, must be extremely rare. In three thousand laparotomies the few instances in which we have found this condition have been caused by a definite pathology. In five cases of acute persistent intestinal stasis in which we have opened the abdominal cavity angio-neurotic edema has been found. The intestinal symptoms were preceded or followed by ecchymoses of the skin, suggesting Henock's purpura, but the diagnosis was difficult and laparotomy for persistent intestinal spasm accompanied by vomiting seemed imperative.

How long we shall depend on medical treatment, and when to operate on such cases is difficult to determine. The condition is comparatively so rare that I am inclined to agree with Professor Flint that we should not allow its possible existence to swerve us much in our judgment when persistent symptoms of obstruction exist, and thereby overlook and neglect a pronounced ileus of mechanical character which could not recover without surgical aid. In Dr. Cassidy's first case with symptoms of obstruction and tumor formation he did not state whether or not there was an autopsy.

DR. PATRICK J. CASSIDY (Norwich): No; the cause was supposed to be chronic indigestion.

DR. OLIVER C. SMITH (Hartford): Then it is not proven that the case was one of dynamic ileus. Cases frequently die of recurring attacks

of intestinal obstruction, and without operation or autopsy the cause of the obstruction is undetermined; and while there is no doubt that an ileus may be produced by local or remote irritation of the nerve supply of the intestine, its persistence sufficiently long to cause complete obstruction and death must, I think, happen with extreme rarity.

The tendency on the part of the physician in cases of intestinal obstruction, from whatever cause, is to err on the side of conservatism; it is especially so in post-operative obstruction due to paralytic or mechanical ileus caused by adhesions or kinks. The dread of, and opposition to, a second operation leads us to persist with medical measures.

It is certainly very difficult to determine the definite cause of post-operative distension, obstruction and vomiting, and I know of no condition that causes more anxiety and calls for more careful judgment. If after a fair trial of rectal enemas and gastric lavage the condition persists, it is wiser to explore, radically relieving the obstruction if we can, or by doing a temporary enterostomy, preferably a colostomy, than to wait indefinitely hoping against hope that the condition will be relieved by medical measures.

In my own experience I am conscious of having postponed colostomy too long, and finding not infrequently a constricting band, a volvulus, or adhesion not a pseudo-ileus but a pronounced and definite ileus, which only surgical intervention can relieve.

THE PRESIDENT: Is there any further discussion?

DR. JOHN W. CHURCHMAN (New Haven): I want to refer briefly to two cases that illustrate points that have merely been touched upon by Dr. Cassidy. The first case was in a patient in whom we had an opportunity not only to see the condition that Dr. Cassidy has described but also to see the actual lesion. The patient had symptoms of obstruction—pain predominating, and nausea without vomiting. It was diagnosed as a case of chronic obstruction, and it was decided to operate. During the operation, the small intestine became completely obstructed by a sharp and definitely localized spasm in the ileum. This caused a tumor mass, which could be picked up and handled, and which had been palpated before the operation. It made the diagnosis absolutely positive, because the enterospasm was seen in the intestine at operation. In this patient, a practical cure was brought about by the administration of large doses of belladonna.

The other case illustrates the risk that one runs in assuming that in any given case the disease is due to an enterospasm. The patient had a definite attack of angio-neurotic edema, with the typical picture of intestinal obstruction, including pain due to enterospasm. The diagnosis was made; but, as a matter of safety, an exploratory operation was

done and the diagnosis confirmed. Two years later, the patient had a similar attack; but in this, the skin lesions were not present. The same man who had operated previously had the patient in charge again this time, and assumed that the condition was angio-neurotic edema this time also. He was observed for a number of days. Finally, we operated again, and found general peritonitis from the appendix; and the patient died. Therefore, I think that this case emphasizes strongly the point that it is far safer to explore in a doubtful case than to assume that the condition of enterospasm is present.

DR. WILLIAM H. CARMALT (New Haven): I remember a case I saw in consultation with Dr. L. W. Bacon of New Haven, some years ago. This case presented some features that were different from those described, being simply those of intestinal obstruction persisting for several days. An operation was finally performed by Dr. Bacon, who told me that he had found the ileum for two feet contracted down to the size of a lead-pencil. There was no opportunity for the intestinal contents to get through. It was absolutely tight. He relieved the condition by a gentle stroking manipulation over the surface of the intestine. This relieved the condition of spasm, and the intestinal flow went on again. I saw the patient subsequently, in a second attack. I should say that the patient was a lager-beer saloon-keeper, and that just previous to his first attack he had indulged in sauerkraut and various other substances, which did not have a good effect on his digestive apparatus. He was warned about his diet. Several months afterward, having in the meantime observed good habits regarding his eating, he indulged for a second time in a sauerkraut feast; I saw him in this second attack, in consultation with Dr. Bacon. It was a question whether he should be operated on again. Knowing what the condition had been in the first attack, we decided not to operate, but treated him medically. An anesthetic was first given him, then somewhat large doses of atropin; and the attack passed off, but that was a case in which the condition was different from what had been prescribed heretofore, where the spasm was simply persistent. That was all that there was to it, and this simple treatment did away with the intestinal obstruction.

DR. ERNEST H. ARNOLD (New Haven): Dr. Carmalt's reference to sauerkraut points out possible mechanical factors which may cause spasms. Dr. Flint's remark of tumors pressing forward on the mesenteric plexus might explain the spasm of the intestinal tract that we meet with in deformities of the spine. In tubercular lesions of the dorsal region of the spine, spasms, signalized by pain in the region of the stomach, are frequently observed. That these spasms include spasms of the vaso-motor system, the relatively frequent occurrence of ulcer of



the stomach in cases of this type would suggest. They are most frequent and most violent in cases where the gibbus formation is most pronounced. Pressure on the spinal nerves is a nearly constant symptom of all deformities of the spine, whether these deformities be of destructive or degenerative nature.

I am not well enough posted on the anatomy of the plexus in question to say whether they are connected with the spinal nerves directly or indirectly. If they are, the pressure on the nerves must undoubtedly have an influence on them.

The other mechanical factor may produce direct pressure upon these plexus. In tubercular lesions of the spine, the abscess formation often-times gets to be very large, large enough, at any rate, to make it more than probable that it exerts pressure upon the structures in question. For both reasons, I should suggest that an examination of the spine is always important in cases of this type.

DR. JOHN E. LOVELAND (Middletown): May I ask a question? I wonder whether, in looking up the subject, Dr. Cassidy noted whether the paralysis always takes place at the same point. That would have an important bearing on the treatment. If that were so, anastomosis or excision might cure the patient.

THE PRESIDENT: Is there any further discussion of Dr. Cassidy's paper? If not, I will call on the author to close the discussion.

DR. PATRICK J. CASSIDY (Norwich): In answer to the last speaker (Dr. Loveland), I would say that the resection was done by Dean, of England, in his case. There were four attacks, and four operations were performed on the same woman; and in the three operations before the resection was done, the attacks were all in the same portion of the gut. He did the resection to relieve the condition, but it was not relieved. The point that I wanted to bring out in the paper is the necessity for early operative interference in all cases presenting the symptoms of intestinal obstruction, without paying too much attention to the fact of the existence of such a condition as pseudo-ileus of this type.

Dr. Smith spoke of my first case as perhaps not being a true enterospasm. I have been doubtful myself, because the man had a lesion in the left apex; but he died during an attack of the disease, a recurrence of the spasm. I do not know why the death certificate was made out as of death from indigestion. I did not see him in the final attack.

The treatment that has been advised, the medical treatment, has been the treatment with belladonna and opium. These cases of enterospasm are not to be confused with cases of pseudo-ileus due to irritative

causes, either in the gall-bladder, or due to round-worms, or due to adhesions, in the gut somewhere else. We know that often, in operating on cases of mechanical obstruction or pseudo-ileus due to an adhesion, we find intensely contracted portions of the gut below the point of adhesion or constriction.

The one point that I wanted to bring out, and rather insist upon, is the fact that although these cases are rare, they seem to be increasing in number or are being reported more frequently. The first case was reported by Hawkins, in 1906. They are apparently increasing in number; yet we should not allow any doubt to enter our mind about the justice in the position of early opening of the abdomen even though there is the chance of the condition being one of enterospasm.

## The Aniline Dyes in Surgery.

DR. JOHN W. CHURCHMAN, NEW HAVEN.

I wish to speak of the new principle of selective affinity which drugs have for the cells of the body. Of course, this principle is really an old one; because a number of the drugs that we have long had depend, for their action, on selective affinity of a most striking type. The recognition of what this principle really signifies is, however, new, because it is now being investigated by scientific work all over the world.

This work has had two general effects. One is in increasing our ability to recognize cases, and the other is in increasing our ability to treat them—diagnostic and therapeutic results. The first is an old one, and is illustrated by some of the most familiar drugs—the cycloplegiacs and the drugs used to dilate and contract the pupil; it is hard to imagine a selective principle more keen in the way that these drugs pick out certain cells and spare others. Some of the poisons, and particularly lead, exhibit an affinity of this sort in a remarkable degree. Lead paralyzes some motor nerves alone, leaving the remainder untouched, thus producing the wristdrop or palsy, a selective action of the most precise kind. Another selective action of this kind, exhibited by a virus, is shown in infantile paralysis, where not simply are some of the motor-nerve elements paralyzed, but those that lie next to each other will not be affected alike. The rectus, for instance, will be paralyzed, and the sartorius absolutely spared.

Two drugs that exhibit this selective action are quinine and mercury; and these drugs, though used in medicine for a great number of years, were introduced on purely empirical grounds. Nevertheless, they represent, as well as the newer synthetic drugs, such as salvarsan, the same principle. Quinine was introduced from Peru on empirical grounds, and it has stood the test of trial. Mercury was introduced for the most absurd of reasons—because it was cold, and was supposed to combat the heat on which so many diseases depended. It was

introduced for this purpose, and used as an ointment. It was naturally applied to skin lesions, and in that way came to be used in the treatment of syphilis. The most striking example of selective affinity is provided by salvarsan, which represents an effort to produce a drug that will select certain cells and leave others alone. It picks out the protozoan cells—the spirochæte of syphilis—and kills them, in doses that are not toxic for the animal cells. All the drugs useful in therapeutics for their selective action have been drugs that have an effect on the diseases caused by protozoa—malaria and syphilis. Up to the present time, the efforts to apply this same principle to the treatment of bacterial diseases—and, of course, these are the ones in which we are most interested in surgery—have been unsuccessful. I wish, however, to bring to your attention certain results that have been obtained in the last two years, which illustrate the application of this same principle to bacteria.

Two years ago, I found that it was possible to demonstrate a very sharply selective affinity between a very common dye, gentian violet, and certain bacteria. It was found that by the use of this dye one could pick out distinctly two groups of organisms: one, absolutely unaffected by the dye, even when the organisms were deeply stained with it; and the other, killed if stained with it, and prevented from growing if gentian violet were added to the media in which they were planted. This dye is the one used in the Gram stain, and it was found that the organisms killed by this dye were the ones which retain the stain in the Gram method. There are a number of exceptions to this rule, but for the vast majority of organisms it holds true.

This selective action of the dye could be shown by staining the organisms and planting them on suitable media, when the Gram positive organisms refused to grow, and the Gram negative grew better than before; or by adding the dye to the media on which the organisms were growing, when the growth of the Gram positive organisms was inhibited.

I wish to call attention to this chart, which illustrates this action of the dye. These plates are made in two halves. The

upper half contains agar with gentian violet added, and the lower contains plain agar. You will notice in this plate that three stroke cultures have been made: two on the sides, with a Gram negative organism; and one in the center with a Gram positive organism. The Gram negative organisms grew equally well on the two halves of the plate; but the Gram positive will not grow in, or even approach the gentian violet.

This plate has been made in a similar way, except that the organisms used was *Blastomyces*. The Gram positive organisms will not grow, even in the neighborhood of the gentian violet. In this, the plate is made as usual, and divided theoretically in the middle, into two halves. On the left, it has been stroked with ten different Gram positive organisms, which have refused to grow near the gentian violet. On the right, the same Gram positive organisms, plus one Gram negative, have been stroked. The presence of the gentian violet has selected from this mixture of eleven organisms the one organism alone that will grow when the dye is present, and has killed out all the other ten.

I will pass about a few charts, which illustrate all these points, and represent actual photographs. The significance of these findings in bacteriology will be apparent to all of you; but, as they are chiefly theoretical, I will only touch on some of them.

In the first place, we can make pure cultures from mixtures with great ease. If you have *Bacillus typhosus* contaminated with *Bacillus subtilis*, all you have to do is to stroke it across the plate; and you get a pure culture. We have made a number of animal inoculations to learn the effect of impregnating organisms with the stain. This led to a study that has to do with immunity, and also to a study of ultra-microscopic infections. It occurred to us that as one could stain a virus whose toxicity is due to a known organism, like *Staphylococcus aureus*, so that one could inject it into an animal and have the animal survive, it would be a good thing to stain ultra-microscopic infections, in which an organism is assumed to be present, but cannot be seen. These experiments have not gone far enough for me to express a positive opinion, as yet; but they indicate that such will be the case. We have worked with vaccinia, which the

stain does not affect in the least. These photographs represent rabbits in which two series of vaccinations have been made. On the one side, the rabbit has been vaccinated with ordinary vaccine for control; and on the other side, with stained vaccine. The stained vaccine and the ordinary vaccine take equally well. The results in the study of poliomyelitis have been extremely suggestive, and we can positively say that the dye has a distinct restraining effect on the virus; although I am not yet ready to say that it actually kills it. If such is the case, we have succeeded in staining and killing organisms that we cannot see; and whether true or not, we have a new method of studying infection due to ultra-microscopic organisms.

These are theoretical laboratory considerations, and it will occur to you to ask what the practical application of the findings are, if any. I will refer to the experiments made in this direction, to illustrate the difficulty in making an application of findings like these to therapeutics. We have here a substance which, in very small dilution, kills the organisms that in surgery we have most frequently to contend with—the pyogenic organisms. This substance is only slightly, if at all, toxic; so it occurs to one, Why cannot pyogenic infections be treated by simply injecting this drug? In order to determine whether such a method of treatment would be possible, we injected into the ear of a rabbit some gentian violet; and then removed blood from the heart, at successive intervals of three-quarters of an hour. This blood, supposed to contain gentian violet, we put with the agar on the upper half of a plate. We then stroked organisms over the plate, to see whether the gentian violet that had been added to the blood was still present. In this series of photographs, the results of this experiment are shown; and they demonstrate that within three-quarters of an hour the gentian violet had entirely disappeared, and was no longer efficacious in preventing the growth of the organisms. The first two plates were made immediately, and the effect of the gentian violet was still present; but from then on, the blood had none of this bactericidal quality at all. This illustrates what has been discovered by other observers, that when we say that the drug



is not toxic, we may mean that it is split up and does not exist as a drug any longer; and this emphasizes some of our difficulties in attempting to find for bacterial infections a substance that will do what salvarsan does for syphilis; that is, pick out the cause of the disease and spare the host.

The other direction in which the selective principle of aniline dyes has been so valuable in surgery is in the study of the function of organs. At present, we are able to determine the function of a few organs with some degree of accuracy. The motor capacity of the stomach may be thus fairly well measured. I would mention the hypophysis as another organ in which the control that the organ has over sugar may be accurately measured; but I would speak particularly of the kidney, in which there is another instance of the sharply selective affinity of aniline dyes in phenolsulphonphthalein. If injected into the circulation or subcutaneously, it is taken up by the kidneys alone, except a minute part that is taken up by the gall-bladder. It is excreted by the kidney, and by a particular portion of the kidney, and gives us an accurate gauge as to what the kidney is doing in the way of excretion. From the work of Rowntree and Geraghty, since confirmed by observers all over the world, it seems likely that we have in this substance a drug which gives us a clear indication of the functional capacity of the kidney.

This has a practical application in that it affords us an opportunity to determine what the kidneys are doing. The importance of this drug to the general practitioner cannot be overestimated, because it gives him a chance to determine whether the patient has nephritis or not, in the absence of marked urinary symptoms; and the symptoms most difficult to differentiate may be sharply marked off. The method with phenolsulphonphthalein is simple. It is put up in tubes, and injected into the lumbar muscles after the patient has drunk a sufficiently large amount of water. The patient voids this at intervals of a few minutes, into a beaker containing sodium hydroxide, to determine the time of first appearance of the drug. The amount excreted during the first and second hour is then measured. This can be done with accuracy by making up a known solution of the drug and com-

paring it in the test tube. The results have been extraordinarily consistent. This method can pick out nephritis without difficulty, even when it is overlooked clinically,—particularly parenchymatous nephritis. A further application of the drug in surgery is in the determination of the functional capacity of the two sides, of which I cannot say anything this morning.

### DISCUSSION.

DR. BRADSTREET: The discussion on this paper will be opened by Prof. Leo F. Rettger, of New Haven, by invitation.

PROF. LEO F. RETTGER (New Haven): I have for many years been interested in certain phases of chemotherapy and particularly in the study and application of disinfectants. The aniline dyes have come in, of recent years, for a good deal of attention; in fact, methylene blue has been regarded for many years as a peculiarly active agent, and was actually recommended as far back as 1880, through Ehrlich, as we are told, who used it in connection with neuralgia. Methylene blue and its various modifications—Ehrlich's rectified methylene blue and three or four other types of pure methylene blue, together with all sorts of experimental methylene blue, have been employed. These dyes and Dr. Churchman's gentian violet have a decidedly bactericidal action upon certain bacteria. We tried methylene blue, gentian violet and eosin, as well as crystal violet and a few other dyes. What urged us on most was the work of Churchman on gentian violet. We carried out the same experiments, as he had described, by the agar-plating method, in which the plate is divided into halves, one half containing the gentian violet agar and the other half the agar that did not contain the gentian violet; and our results bore out those of Dr. Churchman. While in the plates in which we used Gram-positive organisms we had no growth in our gentian-violet half of the plate, we obtained growth in the plain agar. The Gram-negative organisms, which include the whole typhoid group, grew on the gentian violet half as well as in the plain agar. We tried methylene blue in the same way, and found that it had very much the same action, although we had to use twice as much in order to get the same intensity of action as with the gentian violet. What urged us on to use methylene blue, after having tried the gentian violet, was the fact that gentian violet seems to be lost in blood or animal tissues. All of these dyes have wonderful diffusibility in the body. They are comparatively non-toxic; and, since they have such strong bactericidal action towards many kinds of bacteria they may be of much value in the treatment of various sorts of bacterial infections, especially abscesses and

suppurations, in which the common pus-producing organisms (staphylococci and streptococci) are present.

Our methylene blue tests in the plates gave us the same results as those with gentian violet, except that twice as much of the methylene blue was required as of the violet. We used methylene blue, as I have said, because we thought that it might not be destroyed in the tissues as rapidly as gentian violet; it has been demonstrated that methylene penetrates the tubercles (experimental tuberculosis) to quite an extent, and even the tubercle bacilli themselves, and that it retains its original quality for some time after coming in contact with the body tissues. When we tried methylene blue on the anthrax bacillus, which is Gram-positive and susceptible to the gentian violet, we got the same reaction on the plate as with gentian violet; but in animal experiments the results were unsatisfactory. When we treated the cultures of the anthrax bacillus for two hours with the methylene blue, they still killed the guinea pig after hypodermic injection. On the other hand, the gentian violet protected the guinea pigs. In seven injections that we made with anthrax bacilli that had been treated with gentian violet, extending over a period of eight weeks, we have not killed a guinea pig. Our control animals were killed with a relatively small number of the untreated bacilli; so even when you apply gentian violet to the animal, you may get satisfactory results. The methylene blue was disappointing. We did not get satisfactory results in any attempts to immunize animals against anthrax with gentian violet. The toxin appears to be affected as well as the bacillus, which we hoped would not be the case.

In the study of the action of coal-tar dyes on bacteria there is a large field for the chemist, bacteriologist and physician. If we can improve some of these dyes by increasing their bactericidal action, and making them more stable in the body, and at the same time not increase their toxicity, we shall have the ideal chemical agent for the disinfection of animal tissues.

THE PRESIDENT: Is there any further discussion on Dr. Churchman's paper? If not, I will ask him to close the discussion.

DR. JOHN W. CHURCHMAN (New Haven): The discussion has already closed itself, but I would like to say a word regarding the anthrax experiments. I do not know whether you quite understood what Dr. Rettger referred to. I said that the organisms can be killed in two ways: either by staining them and then planting them in suitable media, or by adding the dye to the media on which they are growing. His experiments were with stained anthrax organisms. If you planted these on agar, they would not grow; but the question is, would they grow in the body, where the conditions are more favorable for bacterial

growth? I have done experiments on mice, and have never been able to save a single mouse. These animals are extremely susceptible to anthrax, and one organism will kill a mouse. Dr. Rettger's work was with the guinea pig, a much less susceptible animal; and he injected stained organisms. A few of the anthrax germs lived, but not enough to kill a guinea pig; although enough to kill a mouse.

Our purpose was to see whether we could produce immunity by giving organisms whose virulence was reduced sufficiently to let the animal survive. I wish to pass around one more plate, which is a colored representation of plates planted with two pigment-bearing organisms: one, Gram-positive; and the other, Gram-negative. In this you will see in a striking way the difference between the effect of the dye on the two kinds of organisms.

## Prolapse of the Uterus.

OTTO G. RAMSAY, M.D., NEW HAVEN.

Prolapse of the uterus is a subject of perennial interest, as we all, the specialist as well as the general practitioner, see many cases in the course of the year's work. Any suggestions as to new methods in its treatment are of value, as we all want to be in a position to give the best advice to our patients possible and unfortunately the surgical treatment of prolapse is not always followed by the satisfactory results we hoped for.

Because of these possible poor results after prolapse operations, I have ventured to ask a few moments of your time to consider an operation which we have found successful in a certain group of cases.

Before, however, considering the technique of the special operation, I should like to call to your attention the varying types of prolapse which may occur, and the reasons why some of the operations are failures.

Prolapse of the uterus is simply a hernia and naturally follows when the relationships of the pelvic tissues or the pelvic floor are disturbed, either by trauma, by displacements, or possibly by congenitally weak tissues. If we take for our standard of normal conditions a young healthy woman who has not borne children, we find the vaginal orifice drawn closely up under the arch of the symphysis, the vaginal walls in apposition, and the uterus lying forward in easy ante flexion.

In such a woman any muscular effort merely serves to tighten the pelvic floor, the ante flexion is increased and the cervix, if it impinges at all on the posterior vaginal wall, does so at an acute angle.

Now if this same young woman has a retro flexion or, more frequently, a retroversion, there is another possible picture. In this case, when there is a muscular effort, the uterus is driven lower into the pelvis, the cervix impinges on the vaginal wall

at an obtuse angle and naturally tends to slip downward towards the vaginal orifice, and though each effort is resisted by the pelvic ligaments, there comes a time in many of the cases when, as the result of the constant downward pressure, the cervix reaches and then projects through the vaginal orifice, and I think this is the explanation of the rare form of prolapse in the nulliparous woman.

Why it does not more frequently happen is due partly to the fact that beginning prolapse is painful and is treated by pessary or operation to relieve the displacement and partly due to the fact that, in many of the retroflexions, the fundus is so far back that it either prevents the cervix impinging on the vaginal wall or the bending is so sharp that the cervix still lies in its normal acute angle relationship to the posterior vaginal wall. In other words, a descensus or prolapse is more apt to occur with a retroversion than with a retroflexion.

Now let us consider for a moment the more frequent varieties due to trauma. This trauma is almost always childbirth, and, as a fact, in cases of prolapse we almost without exception get a history of one or more difficult labors. Following these the prolapse may come on within a few months or a year, or the condition may not be noticed for years after the labor, until the tissues, as a result of the menopause, have lost their elasticity.

On examining one of these cases, one of several pictures may be presented, depending on the variety. Most frequently we see a gaping vaginal orifice with bulging anterior and posterior vaginal walls, or the cervix may project between them or be found by the examining finger just between the orifice, the fundus lying in retroversion.

In another variety, the more or less relaxed vaginal orifice is filled by a rounded tumor which may be recognized as the anterior vaginal wall and bladder. In this case the cervix is either pulled down as a whole with accompanying retroversion or there is an elongation of the anterior lip.

In another group the cervix is found projecting several inches through the dilated vaginal orifice; there is a complete prolapse



of the anterior vaginal wall and a partial prolapse of the posterior wall.

On searching for the uterus it may rarely be found outside the pelvis, lying in the prolapsed sac in retroflexion, or more frequently there is found an elongation of the cervix, the uterus still lying somewhere in the pelvic cavity, though probably low down and always retroverted.

Finally there are cases in which there is a complete prolapse of both the anterior and posterior vaginal walls, the uterus in these cases usually lying entirely outside of the pelvic cavity in the prolapsed sac and in retroflexion.

Of course these are merely pictures of the most marked types and we can get any gradation from the beginning descensus with retroversion to the complete prolapse of all the genital viscera.

Now, in considering the development of these different varieties, there is one constant factor at work, that is a change from the normal relationship of the pelvic floor. This may be primarily a retroversion or retroflexion, which means a change in the relationship of the cervix to the vaginal walls. It may be a tearing or a stretching of the suspensory ligaments of the bladder which allows it to descend and change the relationships. It may be bad tears or stretching of the levator muscle and pelvic fascia, allowing the vaginal orifice and the canal to drop from its normal relationship close up under the symphysis.

As a result of this, the vaginal walls which were held up closely in apposition, separate and begin to roll out when there is any exertion or when the patient is on her feet. Then there comes the drag on the cervix and one of two things happens,—either the uterus comes down as a whole, or more frequently the descent of the cervix is more rapid and we get an elongation of the cervix, though the uterus is always dragged on as is shown by the fact that it is always retroverted or retroflexed.

These are the main facts to be remembered in studying the development of prolapses.

With this short synopsis of the cause of development, we are ready to consider the question of operative treatment. If

the idea that prolapse is a hernia and due to changed relationships of the pelvic tissues is right, the ideal treatment would be to bring back as nearly as possible the pelvic tissues to their proper relationships. Theoretically, this should be easy to do, but in practice we find that as a result of the trauma, or because of the long continuance of the misplacement, the tissues have so changed or atrophied that it cannot be done. In such a case, to cure it we must in some way give muscular and fascial support to the hernia.

In studying the reasons of failure in these operations we find two main causes. Either the operation is improperly done, from a wrong conception of the etiology and development of the condition, as for instance, attempting to cure the prolapse by a perineorrhaphy, leaving the uterus still retroflexed, or there is an inability because of destruction or atrophy of the tissues to bring back the normal relationship.

With this in mind we can approach the general subject, of what operation to do. Our patients, as we see them, naturally group themselves in two classes,—the young woman, still actively functioning, and the older women, near or beyond the menopause.

The operation that I am about to describe to you does not apply to the first group, as it means a removal of the uterus and naturally would only be the last resort. In the first group of cases, therefore, the classical operation is the one performed, namely some form of uterine suspension, probably amputation of the cervix, anterior colporrhaphy and a good perineorrhaphy, and it is in this group of cases that, bringing the pelvic floor back to normal, must especially be remembered.

It is in the group of older women that our operation is valuable. We find in these cases that usually the prolapse has been prolonged, there are marked changes in the tissues, great loss of elasticity and atrophy of the muscles, and the classical operation is apt to fail because we cannot give the hernia muscular and fascial support in the usual operation. To meet this we have substituted an absence of the driving wedge, by removing the uterus and cervix, using the uterine ligaments to

help sustain the bladder and vaginal wall and aiding in this by doing a very wide perineorrhaphy operation.

The steps of the operation are as follows:— the usual vaginal hysterectomy is done until the upper part of the broad ligaments are reached, then the round ligaments are cut at their junction with the uterus and carefully separated from the remainder of the broad ligament for an inch or more.

The tubes and ovaries are either left in situ or are removed as may seem best. Then a wide anterior colporrhaphy is done, somewhat triangular in shape, the base of the triangle being about half of the opening in the vaginal wall left by the hysterectomy, the apex coming just under the external urethral opening.

When this is smoothly denuded, the round ligaments are sewed into it along the cut edges of the mucous membrane, the right ligament on the right side, the left on the left, bringing the cut ends of the ligaments to within an inch of the apex of the triangle.

The anterior wound is then closed longitudinally, taking in with the closing sutures, near the base of the triangle, the connective tissue in the lower portion of the broad ligaments. We have thus, besides doing a broad anterior colporrhaphy, added muscular tissue in holding the bladder up, as well as incorporating in the vaginal wall the strong connective tissue bands of the ligament of Koch.

The remainder of the opening in the vaginal vault is closed with sutures, save a small opening through which a small gauze drain is passed. This prevents the formation of a hematoma above the vaginal vault, as it is almost impossible to absolutely stop all oozing.

The operation is finished by the performance of one of the perineorrhaphy operations. We use, by preference, the Holden, which if carefully done insures that all the muscle and fascia remaining is pulled into the new-formed perineum.

I had hoped to be able to report the exact number of operations done by this method with their results, but I regret that I was unable to give you the exact figures. There have been,

however, over seventy-five, and of these I am able to give you results.

In the first place there has been no mortality. The immediate convalescence has on the whole been satisfactory. Most of the patients have suffered quite severe pain for several days afterwards. Many have had to be catheterized, some for as long as a week or ten days. The temperature for the first four or five days has been elevated, running to 100 degrees or a little more and in a few of the cases lasting for a week or ten days.

The final results have been quite satisfactory. In some of the earlier cases I did not sew the round ligaments high enough in the anterior colporrhaphy or, in other words, I did not bring the ends of the round ligaments near enough to the apex of the anterior colporrhaphy triangle, and as a result there was a prolapse of the lowest part of the anterior vaginal wall.

Another trouble we do not see now was due to the ligatures used. In the early operations I used Pagenstecher linen for ligatures and it sometimes took many months for it to work out, during which time there were spots of granulation tissue in the scar in the vaginal vault and a vaginal discharge.

In one case I was not careful to sew the ends of the round ligaments in the colporrhaphy wound and they projected in two granulating tabs which were very slow in disappearing.

On the whole, however, the immediate convalescence has not been very stormy and the results as far as holding up the prolapse have been very satisfactory. The oldest cases are over three years and there is no tendency to recurrence, save the tendency to sag of the anterior wall when I neglected to sew the round ligament near enough to the apex of the anterior colporrhaphy.

Of course I realize that this is a very small number of cases to base any conclusions on and I realize, too, that for many of them the time which has elapsed since the operation is too short to be sure of a lasting cure. I felt, however, that if I could bring the method to your notice, some of you might try it and we could then have larger figures for statistics, as if

we can devise an operation which gives at least a larger percentage of cures than the older ones, with no more danger to the patient, we have taken a step in advance.

## DISCUSSION.

THE PRESIDENT: The discussion on Dr. Ramsay's paper will be opened by Dr. Phineas H. Ingalls of Hartford.

DR. PHINEAS H. INGALLS (Hartford): I consider this paper of Dr. Ramsay's a very valuable contribution to abdominal surgery. Prolapsus uteri has been a bugbear to surgeons for years, and various operations have been devised for its relief. We formerly depended on operations on the pelvic floor and the soft tissues to hold the uterus up, not realizing that the soft tissues have very little to do with its function. Dr. Ramsay has struck the true principle in depending on the round ligaments for the work. You cannot do anything without trusting to them to hold the uterus up. The operation that he described differs somewhat from the operation of Gough, but both involve the doing of a hysterectomy. I have not been as successful as Dr. Ramsay has, and have not seen as good results in cases in which a hysterectomy was performed. Of course, the uterus can be brought up; but there is so much redundant tissue, which he takes care of by his triangular-shaped anterior colporrhaphy; but we had trouble with the rectocele and cystocele, and more trouble than with the uterus itself. It is the sliding down of the bladder and the rolling out of the anterior rectal wall that cause the most trouble. I have been more successful by denuding the bladder from the wall of the uterus, and then stitching it up to the fundus of the uterus, doing some plastic work below, opening the abdomen, and getting the ligaments stretched to work with. Then, by pulling the ligaments up through the fascia, and fastening and holding all the tissues up, pulling up the bladder wall, with a good posterior colporrhaphy, I have given my women more comfort than when I have attempted to remove the uterus. The idea of the stitching of the round ligaments to the apex of the triangle is new to me, and it may be the best mechanical principle. The whole success of the operation depends on just where and how he puts the round ligaments into the apex of the anterior colporrhaphy. That might be done satisfactorily in bringing the anterior wall back into the vagina by the stitching of the ligaments. He has worked out a proper mechanical principle for the treatment of prolapse in old women, and it was these cases that led me to devise the vaginal operation combined with the abdominal. I shall be glad to give his

operation a trial, because it seems to me that the principle of it is a correct one.

Dr. Ramsay did not say what the length of time was in this operation. All such operations are lengthy; even if you do the combined bladder operation, which I do, you can not get through much under an hour or an hour and a quarter. In some women as old as sixty years, that is the element that we must consider. Any operation on these organs for a prolapse that does not include the taking back of the cystocele and the rectocele will be a failure. The mere hitching up of the uterus will not do.



MEDICAL PAPERS.



# The Present Status of the Röntgen Rays in Diagnosis.

(Lantern Slide Demonstration.)

ARTHUR C. HEUBLEIN, M.D., HARTFORD.

I presume to-day every one of you gentlemen have your fractures radiographed or recommend to your patient the advisability of such a procedure, not alone in the hope of obtaining a better result but to protect yourselves. In the course of the last few years I have seen many fractures where none was supposed to exist and normal bone where the diagnosis of fracture had been made. It is astonishing how many erroneous diagnoses are cleared up when referred to the final court of inquiry in bone injuries, the Röntgen ray. The Röntgen ray differentiates between those cases where a good result may be expected and those in which a probable poor result is promised.

First we had to overcome the skepticism concerning the accuracy of Röntgen ray in diagnosis of bone injuries and this same obstacle has seemed to follow us in proving its efficacy in diagnosing urinary stone, later lesions of the gastro-intestinal tract with the bismuth meal and enema, and now hydronephrosis and ureteral kink by means of the collargol injection of the ureters. This skepticism is now fast disappearing and will, I feel sure, give place to greater confidence in these newer applications of the Röntgen ray in diagnosis.

Without going into detail, I will mention the different diseases in which the Röntgen ray is of value as a diagnostic agent.

In fracture of the skull the extent of the fracture may generally be determined, although all fractures do not show, especially those of the base. Inasmuch as the skull is a vault and shadows of the one side superimpose those of the other, stereoscopic röntgenography is generally desirable. The floor of the skull and any spreading of the sella turcica will show distinctly in a good radiograph. Any spreading of the saddle is an

indication of enlargement of the pituitary body, hence a radiograph of this region is a valuable aid in the diagnosis of acromegaly.

In diseases of the accessory sinuses and mastoid cells inflammatory processes or fluid will show haziness and obliteration of the cells of the affected side. This is the most difficult of all Röntgen work and special apparatus for centering the tube and patient should be used.

In dental lesions, impacted, unerupted teeth, broken dental drills, tooth roots and alveolar abscesses are readily shown.

The incomparable Sweet method is employed for the localization of foreign bodies in the eye and determines their exact position prior to any attempt at removal. This procedure should be routine as it is very accurate and much unnecessary operative trauma is avoided.

In the thorax, tuberculosis of the lungs, bronchial glands, aneurism, fluid, pneumothorax, enlargement of the thymus gland, relation of the heart and large vessels can be demonstrated to-day. Stereoscopic radiography of the thorax opens a very large and useful field of diagnosis. Frequently the radiograph will show tubercular deposits, enlarged glands and deep cavity formations when physical signs are obscure or not obtainable, but it is fair to say that physical signs and the Röntgen ray findings agree in the great majority of cases. The plate forms an indestructible record and is a mechanical method of registering observations which can be compared from time to time with later records.

Radiograms of the gastro-intestinal tract show the size, shape and position of the œsophagus, stomach, first portion of the duodenum, and large bowel. Growths and adhesions may be shown, which cause a change of outline from the normal. The diagnosis is based on the altered shadow presented by the hollow viscus filled with bismuth solution.

Radiographs of the œsophagus are very reliable in the diagnosis of œsophagael stricture, diverticulum and cardiospasm. This is an accurate and painless procedure and will give more information than the bougie.

Before committing ourselves to a stomach diagnosis based simply on a physical examination, gastric analysis and other well-tried methods, it is essential to have a thorough serial Röntgen ray examination of the stomach, which may reveal carcinoma, hour-glass constriction, adhesions from gastric ulcer, duodenal ulcer and gall-bladder infection, dilatation from obstruction or atony, and atrophic contraction. A thorough knowledge of the motor phenomena must be constantly in our minds. According to Cole, the stomach, not unlike the heart action, has a systole and a diastole and the progression toward the pylorus of a series of peristaltic contractions. Carcinoma and indurated ulcer present much the same radiographic appearance, although carcinoma shows a more ragged worm-eaten surface. During the past year I have several times made a diagnosis of gastric cancer where no growth was suspected and where the gastric analysis was misleading.

Interval radiographs give us accurate information concerning gastric and intestinal stasis and obstruction. According to Satterlee and LeWald, the normal stomach should empty itself in two and a half to four hours; six hours should see the entire meal deposited in the large bowel. Two or three plates are sufficient to establish the size and position and will demonstrate any large growth or adhesions, but many plates must be made in both prone and erect position to establish the diagnosis of a small growth or other minor changes.

To obtain successful radiograms of the second and third portions of the duodenum an Einhorn dilator must be passed into the jejunum and the duodenum filled with bismuth solution.

The large bowel may be examined by either the rectal injection or the administration of bismuth by mouth for adhesions, growths, kinks and ptoses. A low enema of bismuth and acacia will always find its way to the cæcum unless the bowel is completely obstructed, thus proving the futility of the high enema. This is the only preoperative method by which the entire large bowel may be examined.

You are so familiar with the advantage of the Röntgen ray examination of the urinary system for the detection of stone

that I will simply mention the following. No surgeon should to-day operate for suspected stone unless it is demonstrated by the radiograph. With good technique there should only be approximately 5 per cent. error in the diagnosis of stone. In the lower ureteral region it is absolutely essential for the cystoscopist and radiographer to work together, for in many instances the skiagraph catheter in situ differentiates between stone and extra-urinary bodies so frequently found here. With the combined cystoscopy-radiographic work and the collargol injection which Dr. Hepburn and I have carried out for over a year, it is surprising to note how many diagnoses of obscure kidney and ureteral lesions have been established. It is not at all uncommon to find a kinked ureter where the patient had presented all the symptoms of renal colic and a stone had not been found by previous radiographic examination. A kinked ureter is much more common than is generally supposed.

Gall stones do not deserve much mention\* for they are seldom found; only 3 to 10 per cent. when present show on the radiogram, as they are largely made up of organic salts.

The Röntgen ray findings in enchondroma, bone cyst, exostosis, sarcoma, carcinoma, osteomyelitis, tuberculosis, syphilis and periostitis when taken into consideration with the clinical evidence usually enables us to make a diagnosis prior to operation. In osteomyelitis and many of the bone conditions mentioned the location and extent of disease can always be determined, thus giving the surgeon a definite outline of his work. Where sinuses are present a bismuth injection leads us to the focus of the disease.

I will first show you a cinematographic view of the stomach. This is a product of Dr. Lewis G. Cole's laboratory and is as far as I know the only one of its kind in America. This film illustrates the gastric motor phenomena which has been so ably described by Dr. Cole in recent literature.

(Dr. Heublein did not read his paper but instead exhibited a large number of lantern slides showing X-ray plates, etc., of interesting conditions. He also showed moving pictures of the stomach in action.)



## DISCUSSION.

THE PRESIDENT: The first gentleman on the programme to discuss this interesting paper is Dr. Thomas N. Hepburn of Hartford.

DR. THOS. M. HEPBURN (Hartford): *Gentlemen:* X-ray diagnosis, as demonstrated by such excellent pictures as these, is so wonderful that there is little left that one can say, except to congratulate Dr. Heublein on his excellent work. In particular, I wish to refer to the pictures of the urinary tract, demonstrating obstruction of the ureter with hydronephrosis. If Dr. Heublein will be good enough, I should like to have the slides, beginning with No. 15, put on the screen again. It is my privilege to work in conjunction with Dr. Heublein in the field of renal diagnosis. Inasmuch as it is a recent field, we have lately, with the aid of the X-ray and collargol injection of the ureter, discovered that ureteral disease is comparatively common and has been previously overlooked. These patients come into the hospital complaining of pain in the back. They usually have been treated as neurasthenics, or have had the appendix removed, and as most of them are women, very probably the right ovary and tube.

This picture I would like to show you in order to call your attention to the simplest form of renal pelvis, because it is rather seldom that you see an ordinary bivalve pelvis, as shown there. The other kidney had the same sort of calyx as this.

Could I have the next slide? This, I should like to refer to, because it shows a much more complicated type of pelvis and calices. I feel that we cannot say which are normal calices until we have more slides to draw our conclusions from. Although the pelvis looks enlarged, it drains perfectly well; and there is no stricture along the ureter.

In our method of getting collargol injections, we vary somewhat from the usual method. Most people pass an ordinary ureteral catheter up to the point of stricture, and then inject with the collargol; but we use a dilating catheter, inserting it into the ureteral os until it fits snugly, and then let the collargol flow in, using the gravity method. Anywhere along the course of the ureter, you may see the stricture in the fluid column, which you would not see if you had a stiff catheter in there.

The next picture shows one of the reasons why the cystoscopist has to be very careful in making a diagnosis. If you were doing a renal function test for these two kidneys, you might force the catheter up against this kink and feel that you were in the renal pelvis. Very little phthalein urine would appear from the catheter. The kidney would have been secreting into its own pelvis, and you would have had a wrong impression regarding the parenchymal condition of that kidney. This, I think, shows the value of putting the dilating catheter in, rather than

passing a catheter through. That stricture there would not have shown up unless we had a fluid column, instead of the ordinary catheter column.

This picture illustrates the type of operation to be selected, according to the degree to which the kidney parenchyma is destroyed. The outlines of these calices are not so clear-cut as in the previous slide.

This shows the next stage, a definite ureteral obstruction. Without going into the matter, I want you to notice the calices. They are spread out considerably, although it is not a cystic kidney by any means. There is still a good deal of parenchyma there, but you see the parenchymal tissue beginning to break down.

The next picture shows the last stage of the condition, where the kidney is completely cystic and the parenchyma is entirely destroyed.

These pictures help you to decide what you are going to do at your operation, whether to relieve the obstruction or do a nephrectomy. If you have these points clearly in your mind before going into the operation, it will help you a great deal.

I should like to refer to another point of renal diagnosis with regard to calculi; and that is, that it is absolutely essential, in taking pictures for renal calculus, to take both kidneys. Double renal calculi are exceedingly common; and also it is quite important to remember that renal calculi, if in the parenchyma, and you have infection, are very likely to return. Where you have a double renal calculus and cannot do nephrectomy, but have to do nephrotomy, it is important to tell the patient that there is a strong possibility of recurrence. It is also important for the surgeon to get a picture afterwards, in order to prove that the calculi are not there; because a patient may get a recurrence and fall into other hands. If the picture then taken shows calculi present, you may be criticised for not having performed your duty at the first operation, unless you have the X-ray to show that the calculi had been removed.

**THE PRESIDENT:** The next gentleman to discuss this paper is Dr. Orrin R. Witter of Hartford.

**DR. ORRIN R. WITTER (Hartford):** Demonstrations such as Dr. Heublein has given us more fully illustrate the value of the X-ray in diagnosis than any written article could do. We all appreciate the good derived from the original plate and the lantern slides, as reproduced. I cannot add anything to what has been said, but would emphasize one or two points. One is the value of a negative finding in the case of a kidney condition in which the entire clinical picture is of renal calculus with extreme pain and blood in the urine, the X-ray picture being negative. We appreciate the fact that sand and the smaller calculi, with more or less organic matter, will not show a distinct picture on the plate; and in many of these pictures, this would lead

us not to operate at once, and would urge us to more careful consideration as to whether the blocking of the ureter might be caused by an acute infection of the kidney. If we are still led to believe that it is a small stone or sand, we should appreciate the fact that it is almost impossible to locate and to remove the stone, if the patient is operated upon.

Regarding the shadow in the intestinal plates: I wish to emphasize the value of the two positions, the upright and the horizontal, in taking the picture. Particularly in ptosis of the bowel, the range of position is very considerable; and comparative plates are of great value, and should be taken in each case. Also in the large intestinal work, the possibility of a contraction constricting the lumen enough to give us the picture of a neoplasm or carcinoma must be considered. A series of pictures of this one region would often throw light on that, as the continuous peristaltic action would dilate at one point and constrict at another; so that what had seemed to be a pathological condition would be found to be simply the normal condition.

THE PRESIDENT: The next man to discuss this paper is Dr. Harry W. Fleck of Bridgeport. He is absent, and as he is the last discussor of this paper on the programme, the subject is now open for general discussion. Does anyone else care to discuss the paper?

DR. GEORGE BLUMER (New Haven): I just want to call attention to one or two points: one, in connection with the necessity of taking pictures of both sides. You occasionally find cases of renal stone with the pain referred to the wrong side. The second point is the value of negative pictures, on account of the fact pointed out a number of years ago by a German physician, that occasionally chronic interstitial nephritis is accompanied with typical attacks of renal colic. In such a case, a negative picture would be of the greatest value.

THE PRESIDENT: Is there any further discussion? If not, I will ask Dr. Heublein to close the discussion.

DR. ARTHUR C. HEUBLEIN (Hartford): I always make it a point to go over both kidney regions in cases of suspected stone—both kidneys and ureters, and the bladder; because occasionally pain is referred to the opposite side, as Dr. Blumer has suggested. I saw one such case. Bilateral stone does also occur quite frequently. Tiny stones, of course, will not show on the plate; so whenever I render a report, I say, "No stone large enough to warrant operative interference." There is nothing that bothers a radiographer so much as to have a person come with a tiny calculus in his hand, and say, "You did not find this."

## Pyelitis in the Adult.

CHARLES J. BARTLETT, M.D., NEW HAVEN.

Pyelitis is a fairly common disease both in adults and children. It is also one of the easiest of diseases to pass unrecognized. Either it is entirely overlooked or fully as often mistaken for some other condition entirely foreign to the urinary system. In this category are malaria, lumbago, a delayed puerperal sepsis, chronic appendicitis, etc. These errors in diagnosis have two explanations. First, a large proportion of all cases of pyelitis have no definite localizing symptoms. This is quite contrary to our usual notions of this disease. Secondly, it is the exception rather than the rule that careful microscopic examinations of the urine are made as a routine, and as long as this continues they are bound to go unrecognized. The necessity for early recognition of the condition is apparent to any one familiar with the appearance of the lesions occurring in the kidney. In an acute pyelitis the destruction of tissue is as a rule slight; the condition may be relieved by appropriate treatment before the kidney parenchyma is deeply involved. In the later stages with the usual complications the organ is beyond repair by any means.

In this paper I shall not limit myself to a discussion of pyelitis in the strict anatomical sense of the term, that is a process confined to the pelvis of the kidney. This is for the reason that inflammation beginning here is prone not to restrict the anatomical boundaries of the pelvis. For a time it may be a simple pyelitis but sooner or later the kidney parenchyma is apt to be involved and the condition becomes a pyelonephritis; and from the clinical standpoint the differentiation between a pyelitis and pyelonephritis is often impossible. I shall speak only of the disease in adults because pyelitis in children is to be considered in the next paper.

The relative frequency of pyelitis is shown by autopsy records. In a study of 20,770 such records from different Austrian hos-

pitals made by Kapsammer, 750 cases of pyelitis and pyelonephritis were found, that is 3.6 per cent. And less than one-third of these were correctly diagnosed during the life of the patient. This is proof beyond question of the frequency with which these cases occurred and were unrecognized, and I believe it is no exaggeration to assert that nearly as large a proportion still go undiagnosed.

I shall first consider the recognition of this condition. And for our purpose we may omit that portion of the cases now usually recognized, namely, those in which there are definite localizing symptoms, such as pain and tenderness in the region of the kidney. These are so obvious that they cannot well be overlooked. Such cases, whether complicated by calculi or not, I believe to be decidedly the exception, not the rule. More often the disease appears in one of two quite different forms. In the first of these there is evidence of an acute infection, chills, a high fever which may be septic in type, rapid pulse, and a moderate leucocytosis. The localizing symptoms are lacking or so slight as to be overlooked. For some reason, perhaps by chance, I have seen more of these cases during the puerperium when they are particularly misleading, being naturally mistaken for an infection of the uterus. And I have been surprised to see in these not only the lack of pain in the kidney region but also the very slight tenderness here upon pressure which they show. It may be incorrect to speak of these as acute. Many of them are probably an acute exacerbation of a previously existing unrecognized pyelitis, with a sudden absorption of toxins from the inflamed area. However that may be, the condition is readily overlooked until the urine is examined. And I have found that one cannot always rely upon the statement of the attending physician that the urine shows nothing. I feel safer to examine the sediment myself.

The other type of case is the opposite of this. Instead of the marked constitutional symptoms the process here is so insidious as to be overlooked. The localizing symptoms, if present, are of that indefinite variety which may accompany any one of several different pathological conditions. This is the variety



which, if noticed at all, is liable to go into the category of lumbago, chronic appendicitis, etc. Here, as in the former type, it is the examination of the urine which must be the real determining factor in the case. And it is the examination of this with its positive findings which leads to the recognition of a very slight tenderness in the region of one or both kidneys, more often of the right alone.

In pyelitis the urine varies much in different cases, and at different times in the same case. The variation in the quantity of urine excreted, a decrease in the acute cases and an increase in the more chronic ones, which is usually present, may not be marked and is of course not distinctive of this condition. Pyuria is present, but it should be remembered that this does not always mean a densely turbid urine with a large amount of sediment. In fact, there may be at most but a very slight turbidity and the sediment correspondingly small. It is only a careful microscopic examination that may indicate the condition present. Another circumstance which is often overlooked is that when pus is collecting in considerable quantities in the pelvis of the kidney in pyelitis there temporarily may be no pyuria provided the condition is unilateral. This is explained by a blocking of the ureter of this kidney for the time by pus, or a calculus or a kink in the ureter. For this reason repeated examinations of the urine may be necessary to reach a diagnosis.

Will an examination of the urine in a case of pyuria show whether the pus is from the kidney pelvis rather than from some other part of the urinary tract? I have been interested in this for some years and do not agree with those who say that this cannot be done. I think that under favorable circumstances it is possible to do so. If there is pyelitis without cystitis this can be diagnosed fairly accurately from the urine. If cystitis is present, it is more difficult to determine whether the pelvis is also involved. There is perhaps no one thing alone in the urine which tells that we are dealing with a pyelitis, but there are several factors which combined may indicate the pelvis as the source of the trouble. The urine in pyelitis is most often acid, though not always. Fewer epithelial cells are present in



pyelitis than in cystitis, while the so-called tailed epithelial cells are relatively more numerous in pyelitis. I have found red blood corpuscles in small numbers more often in pyelitis. Together with the pus there are liable to be casts of the larger collecting tubules of the kidney, at times containing pus cells, which aid in confirming the diagnosis of pyelitis together with some involvement of the kidney parenchyma. I think that in the great majority of cases the diagnosis can be made from the urine. In those exceptional chronic cases in which the urine is constantly alkaline, not due to drugs, but where in spite of this the examination of the sediment is sufficient to indicate the condition to be pyelitis, and a cystitis can be excluded, the presence of a phosphatic calculus in the pelvis may be diagnosed with a fair degree of certainty. Crystals of acid salts in a freshly voided urine giving evidences of pyelitis may indicate a calcium oxalate or urate calculus. As already mentioned, when a cystitis is present the diagnosis of an accompanying pyelitis from the urine examination is more difficult. It then becomes largely a matter of finding the large tube casts with pus cells which show the involvement of the tubules in the pyramids of the kidney as an extension of a suppurative pyelitis. In the female it is often essential to obtain a catheterized specimen of urine, and in all cases where a bacteriological examination is to be made it should be obtained and kept under aseptic conditions and examined while perfectly fresh.

In considering the etiology of pyelitis we may disregard those cases due to drugs or to the toxins of the acute infections, as the cause is here evident and relatively unimportant except as a predisposing factor to bacterial growth. My own results in the bacteriological examination of the urine in pyelitis agree with those obtained by others, that the condition is practically always due to bacteria, that the offending bacterium whatever its nature is generally present in pure culture, and that the colon bacillus is the organism present most often. The other bacteria which are less often found as the cause of pyelitis are, however, of importance as some of these, like the *B. proteus vulgaris* and certain staphylococci, are capable of decomposing urine and

in this way are active factors in the production of phosphatic calculi in the pelvis. In females the colon bacillus is by far the most common invader according to all reports (Von Albeck, Lenhartz, Brown, Rovsing). In males (Rovsing) it appears to be much less common. And here mention should be made of the comparative frequency with which the tubercle bacillus is the cause of pyuria from the involvement of the pelvis and lower portion of the kidney substance. Any pyelitis with an acid urine, which cannot be satisfactorily explained by other bacteria present, should be considered quite possibly tubercular and a careful microscopic search made for the tubercle bacillus. It is as a rule not easily found and repeated examinations may be necessary, and often animal inoculation, before it can be demonstrated.

The presence of such common bacteria as the colon bacillus and the staphylococci as the active cause of pyelitis brings up the question of how they invade the pelvis of the kidney. I shall take but little time in discussing the route by which they reach the kidney. It has been well established that bacteria reach the kidney frequently through the blood, also by means of the ureter, and through the lymphatics, at times apparently coming directly through the wall of the colon to the kidney. The ascending route through the ureters is probably much less common than formerly believed. Even when pyelitis is secondary to a chronic cystitis the route may or may not be by means of the lumen of the ureter. This question of the route of invasion, though of scientific interest, does not appear to me to be of as much importance as are the underlying causes which favor infection of the kidney by the colon bacillus and other organisms. Under normal conditions the urine is germicidal and the epithelial lining of the urinary tract from the pelvis down is resistant to bacteria. The predisposing factors of pyelitis are such as cause here a local lessening of resistance to bacterial invasion or such as cause an increased virulence of the organism. Of these the former seems the more important. The most common appears to be some anatomical condition which interferes with the outflow of the urine, and particularly when

this interference has already been followed by the development of a cystitis. I need only to mention this as it is so well recognized as seen in cases of hypertrophied prostate, strictures, etc. The movable kidney with its passive congestion and often compression of its ureters with resulting slight hydronephrosis is not so often considered in this connection as it deserves. There are numerous other factors, only two of which I will mention. The first of these is constipation. As shown by Posner and Lewin the intestinal wall becomes pervious to bacteria in various pathological conditions, and such lesions of the mucous membranes as may occur in constipation may allow bacteria to enter the blood stream. Also the virulence of the colon bacillus is increased in diarrhea and other intestinal diseases. Digestive disorders thus may play a somewhat important part as accessory factors in the producing of pyelitis. Another factor is pregnancy including the puerperium. This is always mentioned as one of the common conditions predisposing to pyelitis but is forgotten until impressed upon one by meeting striking examples of it. I happen to have seen several of these cases occurring during the puerperium, mistaken for a late puerperal sepsis, and the error is such a natural one and the symptoms so confusing that it seems worth while to emphasize the condition here, although I have already referred to it. The patient may have done well following delivery for a few days but the chart often shows a slight rise of temperature during this time. After a week or ten days or more there is a chill, sudden rise of temperature to 103 or 105 with rapid pulse, all the evidences of an acute infection often with almost no localized symptoms. A characteristic finding in these cases is the lack of tenderness in the region of the uterus. Nor do the lochia give evidence of uterine infection. A catheterized specimen of urine at once shows the pyuria and careful palpation on the right side over the kidney will elicit slight tenderness there. This most often involves the right kidney. Opitz in 63 cases found it limited to the right side in 66 per cent.; while Ward found the right side alone involved in 55 per cent. of 187 cases, in 10 per cent. the left side alone, and in 35 per cent. both sides

involved. This greater tendency of the right kidney to be involved is well worth remembering for diagnostic purposes. Cumston, in discussing this infection of the kidney complicating the puerperium, aptly says "this as many other affections is not diagnosed simply because it is forgotten."

The rational treatment of pyelitis as well as of pyuria in general has been advanced during the past year by the results of studies upon the action of hexamethylenamin. These have come from several sources and have added considerably to our knowledge of the way in which it may be used more effectively in these conditions.

At the meeting of the American Urological Association in 1912, Burnam reported upon a research which he had undertaken primarily to determine the capacity of infected kidneys to excrete hexamethylenamin. The important features of this paper are, first, to emphasize what was previously known but not sufficiently appreciated, that this drug is not itself a germicide at all but that its germicidal action is due entirely to the formaldehyde set free in its decomposition; secondly, to provide what was lacking before, namely a simple test for free formaldehyde in the urine in contrast to one for hexamethylenamin, and thirdly, to show that when the drug is given in the small doses usually employed no free formaldehyde is found in the urine in a very large per cent. of cases. When 5 to 10 grains were given three times a day, not more than two patients out of ten showed any decomposition of the drug into formaldehyde at all. This was also true when the same doses were given to normal individuals. On the other hand, when 20 to 30 grains were given every 4 to 6 hours, over 60 per cent. of the patients showed free formaldehyde in the urinc. He emphasizes the inference which can obviously be drawn from his results, that there is no fixed dose of hexamethylenamin; that in each case this must be determined by testing the urine and increasing the quantity of hexamethylenamin until free formaldehyde is found in the urine; and that the first toxic effect of the drug is shown by irritability of the bladder and is due to free formaldehyde, and that the quantity of urotropin given may be safely increased until formaldehyde appears here.

Jenness experimenting with 200 men was able to confirm Burnam's statement regarding the frequency with which formaldehyde appeared in the urine after the usual dose. These men were divided into groups of 100 each. Each man of the first group was given 10 grains of urotropin twice daily and the urine examined at the end of five hours. All but two of the urines were acid in this group but only 42 per cent. showed free formaldehyde. In the second group, each man was given 20 grains of the drug in the morning and the urine was examined in 2 hours. Here 53 per cent. were positive, an average for the two groups of 47.5 per cent.

The results of other studies on the same topic have since appeared, the latest that of Smith reported before the American Urological Association at their meeting this year. These confirm the value of Burnam's test for formaldehyde and the necessity of increasing the quantity until free formaldehyde appears in the urine. For this purpose the urine should have been recently voided. Burnam's test is so simple that it can be readily used by any one.\* Also these studies show that the setting free of the formaldehyde occurs in the urine itself, and with one exception agree with Jordan's results that the antiseptic power of urotropin in alkaline or neutral urine is almost nothing, and that in urine only slightly acid to litmus the decomposition of the drug may or may not take place. Smith and others have found acid sodium phosphate ( $\frac{1}{2}$  to 1 teaspoonful directly after meals) the most effective drug tried for rendering the urine acid. By this means he has been able to find free formaldehyde in a much larger per cent. of cases than Burnam did.

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\* Burnam's test, as given by him, "consists in adding to the suspected fluid, 3 drops of .5 per cent. aqueous solution of phenylhydrazin hydrochlorid and then 3 drops of a 5 per cent. aqueous solution of sodium nitroprussid; then an excess of saturated aqueous solution of sodium hydroxid. It is important that the solution to be tested as well as the sodium hydroxid be slightly warmed to a little more than body temperature. When formaldehyde is present in solutions of 1 to 20,000, or stronger, there follows an intense blue color which gradually changes to green and then after a few minutes to brown. In solutions of less than 1 to 20,000 the first color is the intense green which passes off into brown. The test is delicate down to 1 to 150,000 or less."



Because of our lack of any effective urinary antiseptic for use in an alkaline urine the results obtained by Jordan with sandal-wood oil in his experimental work are interesting. He found that this drug (20 minims three times a day) apparently has a selective action upon staphylococci, both in acid and alkaline urine. It has no effect upon the colon bacillus or putrefactive organisms. He did not try its action upon the gonococcus or tubercle bacillus.

The vaccine treatment of pyelitis I shall refer to only briefly. From the use of autogenous vaccines in a limited number of cases I am not enthusiastic over this means of treatment as a cure-all. In some cases the symptoms may be improved by the use of such vaccines. I do not, however, recall any case in which the bacteriuria has completely disappeared under vaccine therapy. I feel that this should not be resorted to until the proper use of hexamethylenamin has proven ineffective. When vaccines are to be used they should always be autogenous, for the different strains of the colon bacillus vary so much that stock vaccines cannot be relied upon. Another point to be borne in mind in the use of bacterial vaccines in general is that they deteriorate to some extent after a couple of months even when kept cold and if their use is to be continued longer than this they should be replaced by a freshly prepared vaccine.

There are numerous phases of this subject of pyelitis which I have not referred to and which I hope will be brought out in the discussion. One of these is cystoscopy, which is often of the greatest assistance in confirming a diagnosis of pyelitis from the appearance of the ureteral openings in the bladder; and it is cystoscopy together with ureteral catheterization which must give the final evidence as to whether one or both kidneys are involved; and this in conjunction with the functional tests of the kidney, now so fully developed particularly by Rowntree and Geraghty, must in the future be relied upon to show whether one kidney if uninvolved can functionate sufficiently for the entire body before nephrectomy is done. I have also omitted discussion of the irrigation of the pelvis of the kidney with formaldehyde or with silver solutions for therapeutic purposes;



also the recent method of pyelography by means of the X-rays after dilating the pelvis with collargol in determining the extent of the kidney destruction and the degree of dilatation of its pelvis. Though very valuable, this is the work to be done by specialists.

The few things that I have been impressed with in studying pyelitis is the frequency with which it occurs and is overlooked, the ease with which it is recognized by simple methods available for all and the greater chance for improvement or cure if the cases can be recognized early. And it is these which I wish to emphasize.

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## Acute Primary Pyelitis in Children.

FRITZ C. HYDE, M.D., GREENWICH.

As an introduction to this report of six cases let me quote freely from Still (1) of London, who, under the caption "Fever of Obscure Origin," describes the clinical picture of Acute Primary Pyelitis in Children as follows:—

"A female child acutely ill and in considerable distress, although with no definite evidence of tenderness or pain anywhere, is found to have a high temperature, perhaps 105°, or even higher, and nothing whatever to explain the fever until the urine is examined. I have said female because the disease is rarely seen in boys. . . . I have seen it thrice in males, and in female children I have seen eight cases, five in infants and three in older children. . . . The pyuria which is present in this disease is often not sufficient to produce turbidity, or to the naked eye, deposit in the urine. It may only be sufficient to be recognized by the microscopic examination, and even then show only a half dozen corpuscles to the field with the high power, or a dozen or so with the low power. With so little pus the amount of albumin is so small that it may be overlooked. The urine is acid, unless rendered alkaline by treatment. Dr. Thomson has laid stress upon the occurrence of rigors, or shivering, in the infant, as an early symptom. The bacteriology points to the colon bacillus as the usual, though perhaps not the constant, cause. The fact of its occurrence chiefly in female infants suggests its origin from below, fouling of the vulva with feces. . . . It is noteworthy that there have been unhealthy stools, with or without diarrhoea, just prior to the onset of the pyelitis. . . . It is conceivable that the origin is more direct, from adjacent tissues,—or via the blood,—but if so, it is difficult to explain its localization to the pelvis of the kidney."

Current literature discloses a widespread interest in the condition and furnishes many suggestions in etiology, pathology and treatment.

Charles (2) and Billings (3), independently, discuss the relation of the colon bacillus to pyelitis. They conclude that the infection is ascending and allude to its frequency in females, and in conditions like pregnancy when there is stagnation of

urine in the ureters. Billings says that vaccine therapy is distinctly valuable.

Box (4) calls attention to the sudden onset and the resemblance of the clinical picture to pneumonia. He says the condition is right unilateral, that it often occurs with sub-costal pain and transient pyrexia, and should be thought of in obscure fever in children. In treatment he depends upon urinary antiseptics, having no success with sera or vaccines.

Philhower (5) reported six cases, all girls, of whom five had, or had been exposed recently to, influenza. The colon bacillus was found in the urine of all.

Broderick (6) has seen six cases, five in girls, in all of whom there was a preceding ileocolitis.

Abt (7) states that the majority of cases are due to the colon bacillus, but that they may be due to the pus organisms, gonococcus, typhoid and tubercle bacilli; or, secondary to stone, tumor or foreign body in the bladder. He reported twenty-two cases, one male and twenty-one females, of whom two died.

Beck (8) reported ten cases of recurring pyelitis in children, nine girls and one boy. The recurrences all seemed to develop in connection with ordinary colds. In one case there were five recurrences in ten years. He followed one case through puberty and pregnancy but there was no return after the age of twelve.

Göppert (9) says that from 1.1 to 1.2 per cent. of all children brought to him are suffering from pyelo-cystitis, of whom 20 per cent. succumb, since medical aid is not sought until too late. He states that without treatment all cases die if under eighteen months of age. In 20 per cent., recurrences are to be expected during the first two months even under the most favorable treatment. He emphasizes the value of the ingestion of large quantities of water and the use of urinary antiseptics.

Friedenwald (10) studied a series of eighty cases in a foundling hospital, largely infants, fifty-eight females and twenty-two males. He calls attention to the colon and influenza bacilli as frequent causes. An autopsy upon a case dying of another affection proved that the process may be a simple catarrhal one, which quickly heals. Seven weeks after the onset of the pyelitis

there were no lesions to be found in the pelvices of the kidney, nor in the bladder.

Morse (11) concludes that the infection is ascending usually in girls, and rarely in boys unless associated with phimosis or a circumcision wound; that in most cases in boys and a few in girls the infection is transparietal; and that occasionally it is hemotogenous in both sexes. He has seen fifty cases, 40 per cent. boys, an experience quite different to that of most observers. He advises treatment by alkalis, urotropin and in the event of failure by these, by autogenous vaccines.

Jeffreys (12) reported a series of sixty cases of coliform infection of the urinary tract in children. Two were due to the bacillus enteridis, four to *Proteus vulgaris*, and the rest to the colon bacillus. In another series of 121 cases from the Hospital for Sick Children he found sixty-seven due to the colon bacillus, thirty-seven to staphylococci, ten to streptococci and three to the pneumococcus. He is a strong believer in the transparietal method of infection, basing his opinion upon the frequent association with enteritis and the usual limitation to the right side. In conclusion he says, "The disease is usually due to the transference of the organisms directly from the large intestine to the right kidney, owing to some damage to the former, as by constipation. Ascending infection takes place in a minority of cases, and primary blood infection is rare. The disease must not be looked upon as a trivial complaint; it usually runs a chronic course and not uncommonly ends fatally."

Holt (13), Kerley (14), Freeman (15), Fischer (16), Gray (17) and Neuhof (18) have published series of cases. Attention is called to the frequency with which these cases are missed, due to the failure to examine the urine of sick children as a routine.

#### PERSONAL CASES.

CASE I. Baby M., aged six months, female, became acutely ill with high fever, vomiting and loose stools. Her condition was regarded as an acute gastro-intestinal disturbance. After thorough catharsis, irrigations, and withdrawal of milk from the diet there was no improvement. The

baby was obviously in a toxic condition. I saw her several days after the onset and suggested a leucocyte count and examination of the urine. The former disclosed a count of 22,000 and the latter the presence of a trace of albumin and a small amount of pus in an acid urine. I made a diagnosis of pyelitis and this was confirmed by repeated examinations. Potassium citrate and hexamethylenamine made a prompt impression upon the fever and the baby's general condition, and she made a gradual recovery. During the next three months she had two relapses, although the medication had been continued in small doses. The relapses were of short duration and were promptly controlled by large doses of the medicines. During the second relapse an autogenous vaccine was prepared. The prevailing organism was the bacillus coli, with some staphylococci and streptococci. The vaccine was not used, however, since the temperature had dropped to normal by the time it was ready. The citrate and hexamethylenamine were continued for several months and there have been no further recurrences. The child is now vigorous. During the exacerbations and relapses there were often rigors, the baby looked gray and the body surface was cold.

CASE 2. Baby S., female, two and one-half years old, had a temperature of  $103^{\circ}$ , with no discoverable cause except the symptoms of a slight rhinitis. On question the mother stated that she thought that the child voided too frequently, but without pain. Examination of the urine on the second day showed microscopic pus, a trace of albumin and acid reaction. Citrate of potash and hexamethylenamine were begun at once with prompt relief of the symptoms. Several weeks later there was a slight recurrence. Persistent use of the medicines prevented further return and there has been no relapse during a period of a year.

CASE 3. Baby W., aged six months, female, previously well except some difficulty in bottle feeding, was found to be feverish with a red throat and slight coryza. The case was treated as an ordinary cold for a few days, when the temperature suddenly rose to  $105^{\circ}$ . I found a leucocytosis and microscopic pus in the acid urine. Other possible causes for the fever were eliminated and treatment with hexamethylenamine and potassium citrate begun. Relief was prompt. This case also had two relapses during the next few months, which were relieved by increased medication. For more than a year she has been perfectly well. Frequent examination of the urine has shown no excess of leucocytes.

CASE 4. A girl, aged nine, complained of slight subcostal pain on the right side, with tenderness. The conditions were regarded as a probable strain, as she had ridden her bicycle freely, until, with a chill, her temperature shot up to  $104^{\circ}$ , the pain increased with malaise and headache. The urine showed a small amount of pus, there was a leucocytosis, and other sources of irritation could be eliminated. Potassium citrate and hexamethylenamine were given with immediate improvement. In a week the

patient was out of bed. The medicine was continued in large doses for two months and there have been no recurrences.

CASE 5. Baby A., female, aged nine months, had had difficulty in artificial feeding with several attacks of gastro-intestinal disturbance. Just before her attack of pyelitis she was apparently well. She became suddenly feverish, vomited, and had abnormal stools with mucus. Free elimination and starvation did not bring down the temperature and upon examination her urine was found to contain pus. Under treatment with potassium citrate and hexamethylenamine, her improvement was slow. She had one relapse with speedy recovery.

CASE 6. Baby S., female, aged eight and one-half months, entered the hospital with a history of continued fever and malnutrition apparently dating from the third month. She was in a state of emaciation, weight ten pounds, with a temperature ranging from 100° rectal to 104°. The leucocyte count was 44,500. She had been treated merely as a case of difficult feeding. The urine showed low specific gravity, acid reaction, a trace of albumin, and considerable pus. There was no apparent dysuria. I made a diagnosis of pyelitis. Under hexamethylenamine and sodium benzoate she showed prompt improvement. There was no fever after the fifth day; the pus lessened and disappeared. She left the hospital with no evidence of the pyelitis and with a gain of a pound in weight. Feeding was difficult from the start, but during the last two weeks of her stay she steadily gained.

These six cases, all girls, were characterized in common by fever, usually ascribed at first to some other cause, pus in an acid urine, no bladder symptoms except in one instance, and prompt improvement and eventual cure by the use of urinary antiseptics. In one case the onset of the original attack and of the relapses was by rigors. In four of the babies there had been a previous well-marked gastro-intestinal disturbance. In two cases there was an associated nasopharyngitis. In none was there any evidence of nephritis.

Koplik (19) discusses cases of this type under the head of Cystitis and does not differentiate clinically between cystitis and pyelitis. My observation is that a true cystitis in children is a rare condition unless associated with some gross lesion such as stone, and when present gives symptoms strongly suggestive of inflammation of the bladder. In my cases the bladder symptoms were either lacking or were mild all out of proportion to the severity



of the child's general condition. I think the data of these cases are sufficient to establish a diagnosis of primary pyelitis.

The prognosis must be conservative. A period of at least two months should elapse with complete absence of pus from the urine before a permanent cure can be promised. As Kerley remarks, the urine may be free from pus to-day and show its presence to-morrow.

In treatment, Dr. John Thomson was the first to point out that potassium citrate has a marked influence in reducing the fever and stopping the pyuria. He insisted that the dose must be large enough to neutralize the urine and keep it so. I have used potassium citrate in combination with hexamethylenamine. In one case the substitution of sodium benzoate for the citrate apparently gave better results. My impression is that the hexamethylenamine is the potent remedy. Betz uses an original method of treatment. He finds that the thin, weakly acid urine of pyelitis is the most favorable medium for the proliferation of the colon bacillus, while it is unable to grow in a concentrated, very acid urine. He therefore gives a phosphoric acid lemonade and a diet of meat without vegetables. He increases the concentration by hot air sweat baths.

Box and Kerley state that the use of vaccines is not necessary.

In conclusion I suggest that acute pyelitis in young children is not an uncommon disease. Frequent and routine examination of the urine would probably often disclose unexpected pus. It is altogether probable, too, that cases of mild infection often recover without special treatment.

I believe that the infection is usually ascending, for the following reasons:

1. There are few recorded cases in males. I have seen none.
2. Infection via the female urethra, from soiling of the vulva, is theoretically easy and likely.
3. Infection borne by the blood would probably cause involvement of the true kidney structure and not localize in the pelvis. This would also be true in infection from contiguous structures. The recorded cases, and mine, showed no evidence of nephritis.

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## DISCUSSION.

THE PRESIDENT: The discussion on these two papers will be opened by Dr. John W. Churchman of New Haven.

DR. JOHN W. CHURCHMAN (New Haven): My interest in pyelitis was aroused some years ago, when I had access to a large quantity of genito-urinary material, and observed cases of what was then called bacteriuria—urine containing large quantities of bacteria, pus cells being either absent or present only in small numbers; and there being no symptoms referable to the bladder, cystoscopic examination showing a normal bladder wall. I remember one case of this kind in a man treated for chronic prostatitis, who suddenly developed a urine containing staphylococci in large number. A cystoscopic examination showed a normal bladder, and the urine contained almost no pus. The organisms coming from the kidney were present in large numbers, and continued to be present over a long period of treatment. The cases called bacteriuria are impossible to distinguish from cases that we call pyelitis. In both instances, you have organisms circulating through the kidney, in one instance setting up an inflammation in the pelvis. Just when the organisms passing through the kidney are the cause of inflammation of the pelvis, one cannot say. It is interesting to find out how the organisms reach the kidney. A number of routes have been sug-

gested. The curious thing is that if the organisms reach the kidney by the blood-stream, having got there by an absorption from the intestine, why does this not occur oftener? One can show by experiments on animals that this is possible. Last year, I operated on a number of guinea pigs in which I did this experiment:—The urethra was ligated and divided, and the bladder dissected free. Then the ureteral artery was tied. The bladder was thus attached to the body only by the ureters. I injected an easily recognizable organism into the portal vein, and within two hours it was found in the bladder urine. The only way that it could have gotten there was by the portal vein to the liver, through the circulation to the kidney and down the ureter in the urine. There was no possible way of contamination, because the urine was collected in the bladder, all the orifices of which—namely, the ureter and urethra—were ligated; so that there is no question whatever that organisms can very readily reach the pelvis of the kidney from the blood-stream. We have human experimentation to show the same thing, namely: cases in which typhoid organisms are constantly being discharged, their source being in the pure culture of typhoid bacilli that persists in the gall bladder after an attack of typhoid fever. The gall bladder is emptying its organisms either into the intestine or through the cystic vein into the circulation. In that way the organisms again reach the kidney, so that there is no question that the kidney is pervious to organisms; and that is one way in which they reach the pelvis in these cases. Whether this goes on in normal cases, organisms being constantly absorbed from the portal vein, is not known; but it seems exceedingly likely. The reason that the normal urine does not contain them is that they are not present in sufficient quantity, and are being filtered out by the liver, which has this power.

It is usually stated that one of the sources of infection, particularly of the bladder, and also of the kidney, is directly across, by what is called transparietal infection. If that is so, it is very exceptional. The organisms would have to pass directly through the normal intestine, which they certainly do not do under normal conditions.

With regard to the treatment of these cases, I think that the success of internal medication depends on two things: the character of the invading organisms and the extent to which the organisms have invaded the tissue. In the study that I made of cystitis some years ago, I showed very clearly by clinical study that this was the determining factor in curing cystitis. We can get rid of organisms on the surface of the bladder very readily, but not those in the depths of it. In these pyelitis cases, the same thing probably holds true. If the infection is recent and the organisms are lying on the surface of the pelvis, treatment may be efficient; but if they have invaded the substance of the kidney and have been present for a long while, they will be difficult

to dislodge. It also depends on the character of the organisms, for they respond very differently to different drugs.

The important point in the treatment, I think, is that all urinary disinfectants are vastly more efficient as prophylactic agents than as remedial agents. If you give urotropin, you can render the urine an uncongenial medium for bacteria; but if the bacteria are already present, they will grow in urine that contains formaldehyde from urotropin. I think that cases of pyelitis in pregnancy could be avoided by the administration of urotropin during the puerperium.

THE PRESIDENT: Dr. H. Merriman Steele of New Haven is on the programme to discuss this paper next. Is Dr. Steele present? If not, I will call on the next discussor, Dr. Charles A. Goodrich of Hartford.

DR. CHARLES A. GOODRICH (Hartford): *Mr. President and Members of the Society:* With the increasing interest in pyelitis, one naturally wonders as to its frequency. In reviewing 1,252 consecutive personal cases, I found this condition but twice. In reviewing 780 cases in the hospital, of which I had personal knowledge, it occurred three times, one of these three cases having been transferred from the first series of two, thus making four in all. Last year, 622 children of all classes were admitted into the Children's Ward of the Hartford Hospital. Of these, there was one case of pyelitis that was recognized. There have been a number of cases that I believe were this condition, but were not proven; and at present there is a child in the hospital, an infant of eleven and a half months old, which probably has this disease; but so far, all that has been obtained are small epithelial cells, such as come from the pelvis. The clinical picture warrants one in assuming, however, that we shall shortly obtain the other findings.

It seems to me that these cases are not so easy to recognize as we would at first believe, for it is difficult to get a sufficient number of specimens for examination, as most of them require repeated examinations in order to find that one specimen which will corroborate the diagnosis. From a bedside standpoint there are certain features that are suggestive. The temperature rises with an initial nervousness, there is frequently absence of other findings. There is often an intermittent type of febrile state and many are treated for malaria. Other cases suggest digestive derangements; and in the treatment, it is important to differentiate pyelitis from digestive troubles, because these children are below par and need food which they can safely take, and if they are considered as having only digestive disturbances they will further go down hill.

As regards the treatment, I have not, in my limited experience, had much success with potassium citrate; but urotropin, regardless of the theoretical amount required, in moderate doses seems to produce bene-

ficial effects. As I have said, the nutritional part of these cases is a very important matter. They have often been considered for weeks as having malaria, typhoid fever, etc., and have been reduced in their diet under that impression; although perfectly able to take sufficient amounts of food. In this case in the hospital that I speak of, the patient is taking a liberal amount of whey, which furnishes its nutriment and, I think, perhaps helps in flushing out the kidneys.

THE PRESIDENT: Dr. George Blumer of New Haven will continue the discussion on these papers.

DR. GEORGE BLUMER (New Haven): *Gentlemen of the Society:* In discussing the pyelitis of adults, I shall assume that we are not considering the ordinary forms with which we are all acquainted in patients with prostatitis and strictures, and with spinal cord lesions; because these forms we all recognize. The type not recognized in adults is that described as primary pyelitis, and the type that Dr. Bartlett laid some stress on, which occurs in connection with pregnancy and the puerperium—and, I may add, sometimes in connection with menstruation in nonpregnant women. The subjects have been so well covered that I shall simply touch upon the parts that I think worthy of more discussion.

So much has been said about the sources of the infection—the circulatory, the transparietal and the ascending routes—that I would say that it seems to me that the clinical evidence points strongly to an ascending infection. The fact that the vast majority of cases are in females; the fact that many men who have had large experience state specifically that the condition is often associated with uncleanness of the anogenital region in children, there being opportunities for the soiling of the urethra by feces and sometimes by catheterization; and the bacteriology, the large majority of cases being infections with fecal bacteria,—all these things, I consider, point to an ascending infection. The apparent fact that the bladder is not involved in these cases, it seems to me, does not rule out this probability, because the mechanical conditions in the bladder are different from those in the kidney pelvis. There is much greater dilution, and the bladder is pretty thoroughly washed out at urination; and in children, there is a certain amount of irritability of the bladder in many instances which leads to frequent emptying.

The relation to pregnancy and menstruation demands more emphasis. One-half of the cases are associated with pregnancy and the puerperium or with menstruation. It has been pointed out, and some have held, that these cases should not be described as cases of pyelitis; as there must practically always be some infection of the bladder, and some of the kidneys. As a matter of fact, however, from the clinical standpoint, we are justified in describing them as pyelitis. Very few



of them show clinical evidence of bladder involvement; and a still smaller percentage show clinical evidence of kidney involvement.

Then, as to the symptoms in the adult, the most striking and important is the fever; and we may get two or three different types of fever. In quite a fair number of cases, the disease seems to be self-limited, running a certain course, a fever of six or seven days' duration. Some of the charts shown in illustration of articles on the subject, especially those of Lenhartz, demonstrate that in some instances the run of fever from this disease can not be distinguished at all from that seen in ordinary acute lobar pneumonia, with the crisis, and everything else; so that, as he remarks in his article, the temperature charts in pyelitis and some cases of pneumonia are as alike as two eggs.

That is one type of fever; and it is needless to say that the fever is often associated with chills in these cases. Then there is a type that is apt to be diagnosed as influenza, typhoid fever, and sometimes gastric fever—in which the fever lasts longer—sometimes for weeks and months, when not diagnosed correctly.

There is also a third type, in which the fever is cyclic. In these cases, several things may happen to cause the cyclic fever. Sometimes, in the original attack, one kidney only is involved. The patient recovers temporarily, and there is a second attack associated with involvement of the other kidney. Another type is where the patient has apparent relapses from the original infection, these relapses being likely to occur at the menstrual period. In a great many cases, the infection seems to be, so to speak, latent between the menstrual periods; and with each menstrual period, there is a run of fever again.

The lack of physical signs has struck me very forcibly in the limited number of cases of this condition that I have seen; but I think that this is much more striking in cases in infants than in those in adults. In my experience it has been decidedly the rule in pyelitis in infants for them to have no physical signs, such as tenderness over the kidneys. There is no complaint on the part of the child that draws attention to the kidneys. Of course, there is no excuse, if care is taken in examining the urine, for diagnosing these cases as typhoid fever, malaria, etc. Furthermore, in the vast majority of the cases, there is a marked leucocytosis, so that the condition should hardly be mistaken for malaria or typhoid fever.

Regarding the cases in infants, as contrasted with the cases in adults, one disease has apparently not been mentioned with which these cases are likely to be confused in children; and that is acute lobar pneumonia. At the onset, the patients look like children who have come down with an attack of acute lobar pneumonia. They do not often make any complaint of pain. It is quite common to see cough in these children. They not infrequently have indications of air-passage infection. They



have rapid respiration, and one thinks that they are cases of acute lobar pneumonia in which signs of consolidation are not present. In other cases, a diagnosis of meningitis is made. Pyelitis is a disease in which we are apt to get the condition known as meningismus. As the result of the action of the toxin on the brain, you have vomiting, and may get definite signs suggesting meningitis, like Kernig's sign, retraction of the head and changes in the reflexes. If there is any disease that emphasizes the necessity for routine examination of the urine in every case, this is the disease; since without routine examinations of the urine, the cases are very frequently overlooked.

THE PRESIDENT: Will someone else further discuss these two papers? If not, I will call on Dr. Bartlett to close the discussion.

DR. CHARLES J. BARTLETT (New Haven): I have only a word to add. The possibility of recognizing these obscure cases of pyelitis when careful examinations are made is well illustrated by a recent report of Vanderhoof, published under the heading of "Pseudo-Malarial Types of Pyelitis." This is based upon the study of 2,500 patients in private practice. Of this number he found forty-seven cases, or about two per cent., with pyelitis, and of these, twenty-one had been treated for malaria. He thinks fifty per cent. of the cases of pyelitis have nothing indicating the location of the disease upon physical examination.

Regarding the use of drugs that may be excreted as urinary antiseptics, one thing that has been said this afternoon should be further emphasized, and that is the use of urotropin in connection with any drug that will produce an alkaline urine. That is contrary to sound policy, as shown experimentally. When the urine is faintly acid, there may be some free formaldehyde formed; but when the urine is alkaline, there will be none formed. Hence, the results are more marked when some drug like acid sodium phosphate is given in sufficient quantity to render the urine acid, if possible.

One other thing that I was interested in from Jordan's work was the selective action shown by some drugs in connection with certain bacteria. In attempting to find some drugs that would act as urinary antiseptics when given by mouth, he found that sandalwood oil had an effect on staphylococci, but not on colon bacillus or most other bacteria. In both acid and alkaline urine, it had the same specific action on staphylococci. Urotropin, however, will not act in an alkaline urine. Formaldehyde is only set free from this in an acid medium.

THE PRESIDENT: I will now call on Dr. Fritz C. Hyde of Greenwich to make some remarks in closing.

DR. FRITZ C. HYDE (Greenwich): I think I shall not add anything further.

## The Use of Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis.

DAVID R. LYMAN, M.D., WALLINGFORD.

Rest has long been recognized as probably *the* cardinal factor in the successful treatment of tuberculosis. Whatever the organ affected, the rule holds good that the nearer we can approach to placing the member at absolute rest the better are our final results. In tuberculosis of the bones and joints this is the treatment upon which we most rely. In laryngeal cases if we can only get the patient to stop using his voice—to keep the larynx absolutely quiet—we often meet with astonishing success after other means have failed. In pulmonary tuberculosis, having been without means of arresting the movement of the diseased lung, we have endeavored to keep it comparatively quiet by putting the patient himself at rest during the active stages of the disease and for varying periods thereafter. By so doing we decrease the rate and depth of respiratory movement and the rapidity of the circulation. In other words we put the lungs at comparative rest and decrease the absorption of toxic products from the diseased areas. It is true that many patients are so fortunate as to recover without a vigorous rest cure, but it is equally true that those who adhere most closely to such a course give us a far greater average of favorable results than those who do not; and especially is this so of those in whom the disease was active at the beginning of treatment. The beneficial effects which sometimes follow the appearance of a pleural effusion have at times been noted by most physicians; so much so that there seems to be a growing tendency against the immediate removal of such effusions as cause no distressing symptoms. In spontaneous pneumothorax several cases have been reported in which the appearance of an extensive effusion, which was not withdrawn, has been followed by marked decrease of active symptoms, improvement of general condi-

tion of the patient and subsequent arrest of the disease. In recent years I have had two such cases. The patients both had actively spreading disease before the occurrence of the pneumothorax. Following the effusion, which in each case extended up above the level of the third rib, there was a sudden drop of the temperature, a decrease of cough and expectoration, and the patient began to improve. The fluid was allowed to remain for nearly a year, small amounts being drawn off only when pressure symptoms presented. It was finally removed by gradual stages. In each case the lung to a large extent re-expanded, and the patient secured an arrest of the disease. It is on cases such as these that the treatment of pulmonary tuberculosis by artificial pneumothorax has been based—the object being to fill the pleural cavity with an inert gas, and by direct pressure on the lung to place this organ as nearly in a quiescent state as possible.

The theoretical advantages of such a procedure are many. The compression of the lung not only limits its mobility but also limits the flow of the blood, and the absorption of toxic products through the lymph channels is controlled; cavities are reduced or obliterated and the absorption from the secondary infections greatly lessened. Most important of all, the putting of the lung at rest promotes the formation of connective tissue, and thus contributes to the limitation of the process and its final control. This increased formation of connective tissue has been demonstrated in autopsy reports on patients treated by artificial pneumothorax.

Nitrogen is the gas most generally used for this operation as it is more slowly absorbed than either oxygen or sterile air, both of which have been employed. The apparatus consists of two jars; one is stationary and contains the gas; the other, on a sliding ratchet to allow for its elevation, is filled with fluid with which to obtain the needed pressure for forcing the gas into the pleural cavity. The jar of gas is connected by a tube to the aspirating needle, and this tube has a pass-cock leading to a water manometer on which the respiratory oscillations, the intra-thoracic pressure and the pressure exerted by the fluid

behind the gas may in turn be noted. The needle is equipped with a stilet in the head, so arranged that it can be withdrawn and re-inserted without disconnecting the gas. Dr. Baldwin, of Saranac, has recently added an adjustable guard which is fastened over the shaft of the needle and which enables the operator by firm pressure against the chest wall to maintain the point of the needle at the proper depth, thus avoiding accidental injury to the lung through a sudden slip, or, what was a more common incident, the withdrawal of the needle from the pleural cavity and the consequent injection of gas into the chest wall.

#### THE OPERATION.

There are two methods in vogue for performing the operation—the puncture method of Foralini, who in 1882 first suggested the possibilities of the treatment, and the incision or Brauer-Murphy method. In the latter operation an incision is made under local anæsthesia and the tissues dissected until the parietal pleura is exposed; the needle is then inserted and the gas introduced under the control of the sight of the operator. This method has some advantages. It enables one to see just where the point of the needle is and to avoid injury to the lung and the possibility of gas embolism through injection of gas into a blood vessel. If the pleura be found adherent the wound is closed and another incision made. At the completion of the injection the intercostal muscles are stitched together over the puncture in the pleura and the wound is closed. Where the operation has been successful and the pleural surfaces are separated by gas, subsequent injections are made by the puncture method. The Brauer-Murphy procedure has several distinct disadvantages. The incision impresses the patient as far more of an operation than the simple puncture method. There is much greater danger of infection and more liability of the escape of the gas out into the tissues of the chest wall. The latter is never a serious occurrence, but is at times very uncomfortable for the patient and renders it impossible to maintain the intra-thoracic pressure at the desired

point. Recent improvements in the technique of the puncture method of Foralini, a due appreciation of its possible dangers, and a rigid observance of the rules for its use, combine to make this operation fully as safe as the more formidable Brauer-Murphy procedure, and it is now the one generally in use. The danger of infection is much less. The patient has no dread of the repeated operations, and the escape of gas into the chest wall occurs much more rarely. Its great dangers, injury to the lung or the production of gas embolism, can be avoided by the use of the water manometer, care being exercised never to inject the gas until the oscillations in the tube show beyond doubt that the point of the needle is between the layers of the pleura.

The technique of the operation is as follows: The patient should first be given a small hypodermic of morphine to allay the nervous apprehension. The site at which the injection is to be made must be largely determined by the physical signs; the only general rule being to select that area over the lower portion of the side, either front or back, which seems to present the least liability of pleuritic adhesions. The results of such selections in any series of cases will make one much more lenient toward the diagnostic errors of his fellow practitioners. One of my cases with general involvement of the whole side, of three years' duration, and in which I had grave doubts of being able to get into the pleural sac, proved readily collapsible on the first attempt, while in another, in whom my notes for three months showed no apparent abnormality over the lower third of the lung, all attempts to produce a pneumothorax failed on account of a closely adherent pleura over the whole base. The site having been determined upon, the skin is anæsthetized with a solution of 1 per cent. novocaine with 1-10,000 adrenaline. Through this a long hypodermic needle is inserted and the same solution injected as the needle advances straight through to the parietal pleura. Cocaine should not be used for this purpose. This local anæsthesia is of paramount importance as the deadening of sensation in the pleura practically abolishes the danger of pleural shock—that grave accident/

sometimes met with in aspiration of pleural effusion, and from which several fatalities have been reported in the use of artificial pneumothorax. The track of the needle, including the pleura, having been thoroughly anæsthetized, the skin is then punctured with the point of a small scalpel to allow the passage of the larger needle without the use of force. The needle is then inserted, guarded with the fingers beneath to prevent damage from a sudden slip when passing through the fascia. The advance of the point past this resisting membrane can be readily detected. Next, the easy passage through the intercostal muscles gives warning that the pleura is being approached and finally its slight resistance is readily appreciated after a brief experience. The guard is now adjusted, the tube to the manometer connected and the stilet withdrawn through the head of the needle. It is at this point that the manometer control must be strictly followed to avoid risk of serious accident. When the point of the needle is within the pleural cavity the water in the manometer will register a negative pressure, oscillating during respiration, the negative pressure being especially marked on inspiration due to the suction of the contracting diaphragm. The extent of the oscillations will depend upon the condition of the pleura and the degree of motility of the lung. Where the needle point is in a small area surrounded by adhesions, the respiratory oscillations may be practically absent. The gas should never be injected unless such oscillations of at least one to two cm. be obtained and then *only when the pressure is constantly negative*. If the pressure vary from slight positive to slight negative the probability is that the needle is in the lung and it should be very slowly withdrawn, watching for the appearance of the negative pressure. If no variation be obtained the stilet should be inserted to clear the needle of possible obstruction. If a brief effort fail to produce the required manometer reading then the needle should be withdrawn, the puncture closed with collodion, and a fresh attempt made at some other site. Under no circumstances should any attempt be made to inject the gas in the face of a negative or uncertain manometer reading. In this way all danger of gas embolism can be avoided



and the operation rendered as safe as the incision method. When the readings are as above indicated the stop-cock leading to the manometer is closed and that connecting with the gas jar opened; the jars being at such a level as to permit of a slow flow of gas into the pleural cavity. The pressure at which this is introduced can also be regulated through the manometer, and a pressure of 10 cm. water should never be exceeded. At the completion of the first 100 cc. of injection the gas should be shut off and the manometer reading again taken, and this should be continued at intervals until a slight positive reading is obtained or until the end of the operation. If the patient experiences no discomfort and the gas flows readily, from 300 to 500 cc. may be injected at the first attempt. It is more safe to begin with the smaller quantity and to increase the pressure by frequent small injections than to attempt to produce a rapid pneumothorax. Many cases have been reported in which as much as 1,000 cc. on the first attempt and 1,500 and over on the second have been given. This is, however, unnecessary except where the operation is being done for the immediate control of severe hemorrhage. Compression by repeated small amounts gives the heart opportunity to accustom itself to the change in the pulmonary circulation and avoids the danger of acute dilatation. On the second injection positive reading of the manometer may be induced. The amount of positive pressure necessary will vary greatly. A safe rule is not to exceed 5 cm. of water. Where the lung is readily compressible an extensive pneumothorax may be produced without exceeding this pressure. Where adhesions limit the space of the pleural sac at the site of the injection, much greater pressure may be obtained with but 100 or 200 cc. of gas. The optimum has to be ascertained for each case in turn. The operator must watch closely the condition of the heart, question the patient as to sense of oppression, and as to pleuritic pain, and stop the injection as soon as any fairly marked indication of discomfort is seen. He must remember that nitrogen expands by about one-tenth its volume at body heat and whatever pressure symptoms are evident at the close of the operation will be somewhat

increased within a short time. Where the presence of adhesions limits the amount which can be injected under ordinary pressure, there has been considerable tendency to yield to the impulse to attempt to force apart the layers of the pleura, and positive pressures of 20 cm. and even higher have been noted. Fortunately, experience with induced pneumothorax brings respect for its dangers and most writers are now cautioning strongly against the use of such pressures; the general advice being not to exceed an intrathoracic pressure of 5 cm. of water. Partial pneumothorax is often of benefit and it is better to accept a limited result than to risk a serious accident. The amount of gas finally injected is determined by the extent of compression of the lung as shown by the X-ray wherever this is available; by examination of the chest, by the manometer readings, which should be kept at positive pressure by frequent injections, and by the condition of the patient. If the pneumothorax has been followed by subsidence of fever, sweats, and active symptoms, a tendency of these to again increase would indicate the need for renewed operation.

Once a satisfactory pressure has been established, the interval at which subsequent injections must be made varies greatly according to the rate at which the gas is absorbed. Usually the period is from two weeks to two months, though instances have been reported where effective pressure has been maintained for six months or more. As in the case of a joint we determine the point at which the cast may be discarded by removing it and watching the effect of motion on the lesion, so with the compression of the lung the course of the case after the absorption of the pneumothorax must determine when it can safely be dispensed with. It should usually be continued over an indeterminate number of months.

#### DANGERS OF OPERATION.

The dangers of the operation are many. Pleural reflex can largely be guarded against by carefully anæsthetizing the pleura prior to the injection. Saugman's series of cases, recently quoted by Lilleston in the *British Journal of Tuberculosis*, showed one death from this cause in 104 cases, and in a total

of 2,200 injections. Gas embolism is due to the needle penetrating the lung and entering a blood vessel. This can be absolutely guarded against by never injecting gas until the manometer shows the proper readings. The danger of empyema, due to infection from without, can be controlled by proper technique. Infection from within due to the accidental entry of a superficial cavity has sometimes occurred. Dilatation of the heart can be avoided by the establishment of the pneumothorax by slow stages. Rupture of the lung with fatal pneumothorax sometimes occurs. This has generally been induced by the injudicious use of pressure in the attempt to separate adherent pleuræ. In advanced disease with superficial thin-walled cavities, it sometimes occurs even with the most careful operation. Emphysema of the chest wall from the escape of the gas is not a serious occurrence. The most common complication is the formation of pleural effusion. This is noted in from 35 to 50 per cent. of cases. The effusion is, however, usually quite small, often being unrecognized without the X-ray and rarely seems to have any influence whatever upon the case. The accidents though serious occur but rarely in the hands of conservative operators; and in view of the generally grave prognosis in the class of cases in which the treatment has been used the risk is by no means sufficient to mitigate against the use of the treatment. One accident sometimes encountered, and against which there is no guarding, is the awakening of activity in the opposite side. When this occurs the gas is drawn off and the treatment usually abandoned, though Brauer and others have reported successful cases in which the pressure was applied to either lung alternately. As a rule, however, a slight or even moderate lesion in the opposite side shows distinct improvement under treatment. This is undoubtedly due to the fact that the checking of the toxic absorption from the bad lung brings about a general systemic improvement which exerts a favorable influence on the lesser lesion.

#### CLASSES OF CASES TREATED.

The treatment has as a rule been regarded as one more chance for an apparently hopeless case, but the at times astonishingly

good results it has given in these has tended to broaden its use, and moderately advanced cases with the disease steadily increasing and remaining active in spite of all ordinary measures at our command are now generally included. These latter are to my mind the ideal ones in which to use the treatment, as if left alone the outlook for them is at best but a temporary arrest after the disease has reached the advanced stage, and also because in them we can operate with a reasonable expectation of being able to locate the pleural sac and bring about a collapse of the lung.

Anatomically the general restrictions are as follows: The disease should by preference be limited to one lung, or if the other be affected the lesion should be in the apex not extending to any appreciable degree below the level of the third rib, and should not be actively progressing. Cases in which the chief involvement is in the upper portion of the lung give better results than the chronic basal lesions.

#### RESULTS.

My own experience with this treatment has been too recent to admit of any final conclusions from my results. I have attempted to produce artificial pneumothorax in seven cases, all of whom were active, advancing, and with unfavorable prognosis. In two I was unable to obtain access to the pleural sac; one was abandoned on account of severe pleurisy arising on the opposite side; one continued to fail though the pneumothorax was complete and there was apparently no trouble in the other lung; one is decidedly better but still has active disease; in one case the symptoms have, for the present at least, disappeared, and the patient is up and about and better in every way. I have as yet had no serious accidents. In one case the treatment was undertaken on account of repeated uncontrollable hemorrhages in which death seemed certain. The lung was readily compressed and the hemorrhage entirely controlled. Many similar cases are now being reported.

The literature of tuberculosis presents a constantly increasing number of reports on this procedure; a recent number of

Brauer's *Beitrage* giving no less than thirty-seven articles upon its use. A few of the results will serve to show the value of the method. The recent Tuberculosis Number of the *Practitioner* gives Sangman's series of thirty-five cases; all of whom had one entire lung involved and all of whom had been treated at least one year previously. Of the thirty-five, five had been returned to work; thirteen were symptom free but still continuing treatment; ten showed improvement; seven were dead, two having died from accidents due to the operation.

Robinson and Floyd reported to the American Climatological Association in 1912 on twenty-eight cases; ten received no benefit; twelve showed marked relief of symptoms and six secured an arrest of the disease. Hamman and Sloane, at the meeting of the National Association for the Cure of Tuberculosis, reported a series of fifteen cases. There were two deaths, one from an infection of an already existing effusion, and one from meningitis—in three cases no pneumothorax could be established;—five showed only partial relief; in five the operation was successfully performed with marked benefit to the case. These three series of cases showing 20 per cent. and over of arrested disease give a fair review of the results being reported from the use of artificial pneumothorax. When it is noted that the cases treated are of the advanced type with active symptoms, cases in which the prognosis is almost invariably bad, it must be admitted that the results more than justify the risk of serious accident which is present even under the most careful control, and that it gives us one more chance of helping many cases for whom we can otherwise see no prospect of relief.

## DISCUSSION.

THE PRESIDENT: The discussion on Dr. Lyman's paper will be opened by Dr. H. S. Wagner of Hartford State Sanitorium.

DR. H. S. WAGNER (Hartford): Concerning the treatment of pulmonary tuberculosis by means of artificial pneumothorax there has seemed to develop a wholesome tendency to study one's failures and bad cases. This resulted in bringing to light a great deal of interesting

phenomena and accounts to a certain extent for some of the enthusiasm towards it.

I have had occasion several times to look up my physiology and physics and post myself on pleural reflex, negative pressures on inspiration and expiration, emphysema passing between the lobes of the lungs upward and along the windpipe producing dyspnoea, and the occurrence and non-occurrence of adhesions just opposite to your diagnosis.

Dr. Bullock of Silver City has reported a case taking 7,000 c.c. of nitrogen. This later he succeeded in perfuming with a small amount of peppermint and immediately the patient's sense of taste detected it. He concluded that some lung tissues acted as a valve admitting nitrogen into the bronchus but preventing its return from the bronchus into the pleural cavity.

The service of an X-ray machine is an important factor in this treatment. Some advocate it as necessary. It reveals the fact that the nitrogen may produce considerable displacement of the thoracic viscera without producing much impairment of the vital functions. Cases in which symptoms and signs are not consistent, I hope to be able to subject to a fluoroscopic reading. If one accurately keeps track of the heart, its rate, tension and area of dulness and apex beat, and the respiration as compared to the amount of nitrogen injected and the different pressures varying from the beginning to the end of the operation, and all is in harmony, I believe he can eliminate some cases that otherwise should be X-rayed.

Concerning the assistance rendered by pneumothorax, it seems to be principally of a mechanical nature. It is not a question of figuring on amboceptor, antigen, etc. The actual good accomplished is its reduction of sputum and râles, that is, in cases where we have got our compression. The number of tubercle bacilli and, according to German authority, the amount of elastic tissue are decreased in the sputum. The râles probably disappear because the compression prevents lung tissue from functioning. This is the recognized condition necessary for healing, also shown by the fibrous tissue areas found more abundant in the compressed areas on the cadaver.

From an analysis of one hundred cases with good resistance, I found that it was difficult to decrease râles and sputum. Ordinarily among this number, patients lost temperature, fast pulse and night sweats, gained weight, could take a fair-sized dose of tuberculin or do considerable work; but when it comes to producing a disappearance of râles and sputum, it was a more difficult matter. Therefore, I have concluded that artificial pneumothorax is a plan of treatment worth trying.

THE PRESIDENT: This paper will now be discussed by Dr. Henry F. Stoll of Hartford.



DR. HENRY F. STOLL (Hartford): *Mr. President and Gentlemen:* About three years ago, Dr. McKnight returned from Chicago, having had a talk with Dr. John B. Murphy, who had told him of the work that he had done seven years before in compressing the chest, quite independently of Forlanini. The method was to insert the Emmet trocar and guess when you had struck the pleural cavity, then withdrawing the plunger, and listening to hear the air rushing in and out. The assistant who did the work with Murphy unfortunately died. If he had not, in all probability the work would have been credited to this country, and it would have occurred to someone to have perfected the method by supplying the manometer.

About that time, I had a patient with a cavity in one lung, the left, and with an excellent right lung. I produced a pneumothorax, with Dr. Smith's assistance. The trocar struck the right place, the gas was introduced and we had no trouble. The patient, a woman, was compressed at different times afterward; but not at sufficient intervals to maintain a complete pneumothorax at any time. Every time, however, it brought the temperature down to normal and changed the character of the sputum. Another case, later, went on in the same way. That girl was kept alive for many months. Her temperature came down quite low, and stayed there for some time; but she never could throw off the trouble.

Last year, I used the manometer; and it is the only thing to do, absolutely. The other way, you can often strike the pleural cavity with great success; but if you have an adhesion, you cannot strike it, and the hole is much larger. It is not nearly so satisfactory, and should never be employed, because the manometer is so simple to attach.

In all, I have compressed twelve cases. Three were hospital cases, which I could not follow, the patients being foreigners. Nearly all of them had disease in both lungs. The most ideal cases that I got were three in which the disease was strictly limited to the one lung and there was great mobility at the base with respiration. I could not find better cases for a pneumothorax, but I failed utterly. In the other cases, which you would think must be all bound down by adhesions, I have been able to secure a thorough collapse of the lung.

There are a number of things that I want to bring out. I have used alypin, instead of novocaine, with good success. After injecting the anesthetic, you must wait a moment, and not start the operation on the instant. Nothing is instantaneous in the way of local anesthesia. If you inject the alypin and then do something else for about five minutes, you get complete anesthesia. It is important that the patient does not move, so that when the second needle goes in, it may follow the same track as the first. I once broke off a hypodermic needle in the muscle, and had to get assistance to get it out. Fortunately, it was not

deep in. The wider the fluctuations that you have in the mercury in the manometer, the better chances you have for complete collapse. Otherwise, you cannot get much collapse. I have not used the needle that Dr. Lyman speaks of, but an aspirating needle of fair size; and I use it purposely a little on the slant. The needle goes in much more easily when slanted, and you do not have to use the pressure that he speaks of. By watching the manometer, rather than the patient, for the first evidence of fluctuation, you know that you are in. It is best to have a comparatively short point on the needle.

With regard to sterilization of the apparatus, I would say that what I have is extremely crude. There was nothing on the market three years ago, and I rigged up this. The bottles I put in bichloride; and the tubing I boil. It is a mistake to put water on the tubing that goes to the patient. A little water will stop the manometer reading; so that you think that you are not in the pleural cavity, when you are.

The question of effusion I have encountered in one case. The pressure increased so markedly that I had to put a needle in and let some gas out. In another case, the patient had abdominal distress from the gas, and the X-ray showed an adhesion at the base of the lung, which accounted for the distress. It is a good thing to have sterile camphorated oil or adrenalin chloride right on the table. You may not want it for years; but when you do, you want it quickly. I once saw a patient go bad. He had had no breakfast and a thorough movement of the bowels, and it was noon when the operation was done. He looked blue, but I had some sterile oil there, and gave him a hypodermic injection. In the woman that I kept the chest compression on for eight months, the signs of cavity were absent during most of the time. You should inject about every three weeks. In an operation done by the Murphy method, Dr. Heublein gave a little laughing gas for me; but that is not really necessary. When you need stimulation, you need it.

THE PRESIDENT: Will anyone else discuss this question further?

DR. H. S. WAGNER (Hartford): Concerning the needle, I would say that Dr. Holden of Denver used one with a blunt end. Several millimeters from the end was the opening. I believe the idea was not only to lessen chance of puncturing lung tissue but also to lessen chance of direct introduction of air into vein.

THE PRESIDENT: Is there any further discussion? If not I will call on Dr. Lyman to close the discussion on his paper.

DR. DAVID R. LYMAN (Wallingford): Dr. Stoll spoke of not knowing where the needle was when he penetrated the chest wall. In regard to this I would say that Dr. Floyd has a little tube containing menthol

which he attaches to the tube leading from the gas, so that the patient will notice it in the event of the needle piercing the lung.

The first case I saw I went to Boston to see Dr. Floyd operate. The patient had been treated for some time by another physician and the man said that he had about 2,000 cubic centimeters of nitrogen once a week. Dr. Floyd remarked that that would be peculiar. He found that the other physician had been making the injections over a large superficial cavity which the needle had evidently entered. One could have injected nitrogen into it all day without effect. In such a case the menthol would have given the patient an inkling of what was happening.

I have no X-ray machine either. It would be ideal, I think, to use it in all cases. This picture illustrates my own successful case of the type, and it was the case in which the lung had been involved three years, from top to bottom. We had no idea that I should get in at all; but we did so very easily and produced a slight positive pressure without much discomfort. When discomfort is noted I stop. There is probably an adhesion at the base which is holding the lung at the bottom. The pneumothorax is a lateral one. It would be risky to try to do a complete pneumothorax in such cases. You might rupture the lung down there by trying to force the flow; and the X-ray shows what the condition is and helps avoid this danger. It is very valuable when you have the machine available.

The decrease in the quantity of sputum and the number of tubercle bacilli, as Dr. Wagner says, is the most valuable symptom noticeable.

Dr. Stoll's caution in regard to waiting before passing the needle is timely. I did not do this in my first case as I was taught; but I have done it ever since.

The suggestion of going in at an angle I think is a very valuable one.

THE PRESIDENT: This brings the meeting to a close. Those interested can look at the instrument after the close of the session; and, with your permission, I think that this ends the programme for the year. Usually the Committee of Arrangements requests the Chairman to give some notice. I will repeat the notice given yesterday, in the absence of the Committee, that the doctors arriving this evening in automobiles will park their cars in the driveway between this building and the Hartford Club. The entrance to the banquet will not be through the main door of the Hartford Club. Enter the banquet-hall door from the side of the building.

I want to thank you for your forbearance with me during the session, and I hereby declare the session adjourned.

Adjourned at 5.15 P. M.



PAPERS READ AT COUNTY  
MEETINGS.





## Papers Read at County Meetings.

HARTFORD COUNTY.

*October 22, 1912.*

### PAPERS :

Grinder's Consumption or "Sideiosis." Dr. R. B. Cox.

Discussion opened by Dr. Alva E. Abrams, Dr. Paul Plummer.

Treatment of Fractures. Dr. Ansel G. Cook.

Discussion opened by Dr. Arthur C. Heublein, Dr. W. H. Van Strander, Dr. Joseph E. Root.

Chronic Ulcer of the Leg. Dr. Oran A. Moser.

Discussion opened by Dr. George N. Bell, Dr. Earnest A. Wells.

Report of an Operation for Anterior Poliomyelitis, Tendon Transplantation. Astragalectomy.

Report of an Unusual Case of Acquired Club Foot with Successful Operation. Dr. Joseph E. Root.

The Significance and Management of Arterial Hypertension. Dr. Henry F. Stoll.

Discussion opened by Dr. Edward K. Root, Dr. A. S. Brackett.

### ADDRESS :

The Best Methods of Using Salvarsan. Dr. John A. Fordyce, New York City.

*April 1, 1913.*

### PRESIDENT'S ADDRESS.

### PAPERS :

Diagnostic Aids in Bladder, Renal and Ureteral Diseases by Means of the Cystoscope. Dr. James J. Boucher.

Discussion opened by Dr. T. N. Hepburn.

Nephritis in Pregnancy—Prognosis—Treatment. Dr. M. J. Dowd.

Discussion opened by Dr. T. Weston Chester.

The Treatment of Hæmorrhagic Diseases in Infants. Dr. H. Gilder-sleeve Jarvis.

Discussion opened by Dr. Charles A. Goodrich.

The Treatment of Tuberculous Glands of the Neck. Dr. E. R. Lampson.

Discussion opened by Dr. E. J. McKnight, Dr. Henry F. Stoll.

Digitalis: Its Action and Its Uses. Dr. Walter R. Steiner.

Discussion opened by Dr. William Porter, Jr., Dr. E. K. Root.

NEW HAVEN COUNTY.

*October 24, 1912.*

### PRESIDENT'S ADDRESS :

The Law Relative to Confidential Communications Between Patient and Physician. Dr. Louis M. Gompertz.

## LITERARY EXERCISES :

The Work of the Committee on Public Health Education Among Women. Dr. Alice P. Ford.

Discussion opened by Dr. Mary P. Dole, Dr. J. W. Seaver.

A Plea for the Use of Heat Instead of Cold in the Treatment of Certain Inflammatory Conditions. Dr. F. P. Griswold.

Discussion opened by Dr. E. T. Bradstreet, Dr. W. F. Verdi.

Madelung's Deformity of the Wrist. Dr. J. L. Moriarty.

Discussion opened by Dr. N. A. Pomeroy, Dr. E. H. Arnold.

The Treatment of the Acute Contagious Diseases. Dr. Frank S. Meara, New York City.

Discussion opened by Dr. O. T. Osborne, Dr. F. J. Wright.

## VOLUNTARY PAPERS.

*April 24, 1913.*

## CLINICAL PROGRAMME :

Demonstration of the Noguchi Modification of the Wasserman Reaction in the Diagnosis of Syphilis, and of a similar test for Gonorrhœa. Dr. C. J. Bartlett.

Demonstration of the use of Neosalvarsan.

Denonstration of Spirochæta Pallida. Dr. J. B. Sullivan.

Demonstration of Method of Staining and Stained Specimens of Gonococci. Dr. I. Kleiner.

Demonstration of Methods of Cystoscopy. Dr. William S. Barnes.

Demonstration of the use of Carbon Dioxide in the Treatment of Skin Diseases. Dr. A. G. Nadler.

## LITERARY EXERCISES :

Symposium on the Venereal Diseases.

The Treatment of Acute Gonorrhœa. Dr. A. C. Swenson.

The Treatment of Chronic Gonorrhœa. Dr. William S. Barnes.

Discussion opened by Dr. W. L. Barber, Jr., Dr. O. G. Ramsay, Dr. J. B. Sullivan.

The Modern Conception of Syphilis. Dr. R. A. McDonnell.

The Treatment of Syphilis. Dr. John A. Fordyce, New York City.

Discussion opened by Dr. Henry Fleischner, Dr. A. G. Nadler.

## VOLUNTARY PAPERS :

The Use of Bone Grafts in Destructive Bone Lesions. Dr. E. H. Arnold.

Discussion opened by Dr. J. L. Moriarty.

NEW LONDON COUNTY.

*October 3, 1912.*

## READING OF SEMI-ANNUAL DISSERTATIONS :

Some Diseases of Hæmopoietic Organs with Citation of Cases. Dr. P. J. Cassidy.

Paper by Dr. John G. Stanton.

Paper: Diagnostic Value of Blood Pressure with Demonstration of Instruments. Dr. Wilder Tileston, New Haven.

#### VOLUNTARY PAPERS.

*April 3, 1913.*

ADDRESS BY PRESIDENT, Dr. E. P. Brewer.

OBITUARY of Dr. Charles E. Brayton, by Dr. W. Henry Gray.

#### READING OF ANNUAL DISSERTATIONS:

Direct Laryngoscopy and Tracheo-Bronchoscopy with Demonstration of Direct Laryngoscopy. Dr. Charles Osgood, New York City.

Discussion opened by Dr. A. Peck.

Physical Diagnosis with Demonstration on Clinical Material. Dr. Hubert V. Guile, New York City.

Remarks on "Surgical Diagnosis." Dr. R. W. Kimball.

Discussion opened by Dr. E. A. Henkle.

#### VOLUNTARY PAPERS.

#### FAIRFIELD COUNTY.

*October 8, 1912.*

#### VICE PRESIDENT'S ADDRESS:

Bone Regeneration. Dr. Harris F. Brownlee.

#### OBITUARY:

Myron Winslow Robinson, M.D., Noroton. By Nathaniel E. Wordin, M.D., Bridgeport.

#### READING OF PAPERS:

Symposium on Gonorrhœa—Etiology. Dr. F. C. Hyde.

Pathology. Dr. W. T. Godfrey.

Symptoms. Dr. I. L. Nettleton.

Diagnosis. Dr. S. H. Huntington.

Prognosis. Dr. F. G. Brown.

Sequela. Dr. H. D. Moore.

Treatment. Dr. F. H. Coops.

Discussion opened by Walter B. Brouner, M.D., New York City.

*April 8, 1913.*

#### PRESIDENT'S ADDRESS:

Our County Society.

#### READING OF PAPERS:

Conservatism in Gynæcology. Dr. Howard C. Taylor, New York City.

Discussion opened by Drs. Brown, Bill and Ellis.

Evil Results of Two Common Fractures and How to Avoid Them.

Dr. G. Robert Hertzberg.

Discussion opened by Drs. Pierson, Godfrey and Hawley.

SEMI-ANNUAL MEETING OF THE CONNECTICUT STATE MEDICAL SOCIETY HELD  
IN CONJUNCTION WITH THE WINDHAM COUNTY MEDICAL ASSOCIATION.

*October 17, 1912.*

PAPERS:

- Diverticulitis. Dr. E. J. McKnight, Hartford.
- Subacute Endocarditis. Dr. George Blumer, New Haven.
- Surgical Catharsis. Dr. S. B. Overlock, Pomfret.
- Small Pox. Dr. W. P. S. Keating, Willimantic.

*April 17, 1913.*

PRESIDENT'S ADDRESS. Dr. Edward F. Perry, Putnam.

PAPERS:

- Rights and Liabilities of the Physician and Surgeon under the Law.  
Mr. Charles E. Searles, States-Attorney for Windham County.
- Growing Pains. Dr. Ernest R. Pike.
- Discussion.

LITCHFIELD COUNTY.

*October 8, 1912.*

PAPERS:

- Report of some Interesting Cases at the Sharon Hospital. Dr. J. S. Chaffee.
- Report of Recent Epidemic of Typhoid Fever in Torrington. Dr. George Streit.
- Discussion opened by Dr. J. D. Hayes, Dr. J. S. Bissell.
- Typhoid Vaccination. Dr. W. L. Platt.
- Diagnosis and Treatment of Typhoid Perforation. Dr. N. L. Deming

*April 22, 1913.*

PRESIDENT'S ADDRESS. Dr. R. S. Goodwin.

OBITUARY:

- Dr. George H. Knight, by Dr. J. C. Kendall.

PAPERS:

- Surgical Treatment of Retro-displaced Uteri. Dr. D. D. Reidy.
- Hematuria. Dr. Victor C. Pedersen, New York.
- Anaphylaxis. Dr. George Blumer, New Haven.

MIDDLESEX COUNTY.

*October 10, 1912.*

DISCUSSION OF QUESTIONS FOR 1912:

- Action and Uses of Salvarsan.
- Dissertation by Dr. John Carter Rowley.
- Reports on Salvarsan Treatment by Drs. J. E. Loveland and J. T. Mitchell.
- Leaders of Discussion, Dr. J. F. Calef and Dr. L. R. Brown.

*April 10, 1913.*

## PAPERS :

- Abscess of Liver, with Sterile Culture. Dr. J. E. Loveland.  
Common Colds. Dr. J. W. Fisher.  
The Heroin Habits. Dr. L. R. Brown.  
French Health Resorts. Dr. K. C. Mead.  
The Medical Examiner's Relation to the Profession and the Public.  
Dr. J. F. Calef.

## TOLLAND COUNTY.

*October 15, 1912.*

## OBITUARY :

- Edwin T. Davis, M.D., Ellington, by Eli P. Flint, M.D., Rockville.

## PAPERS AND DISCUSSIONS :

- The Treatment of Certain Disorders of the Digestive System in  
Infancy. Dr. Charles A. Goodrich, Hartford.  
Headache. Dr. Frank L. Smith.

Discussion opened by Dr. Thomas F. Rockwell, Dr. William L.  
Higgins.

- The General Practitioner and Eye Work. Dr. Calvin Weidner.

## VOLUNTARY PAPERS.

*April 15, 1913.*

## PAPERS AND DISCUSSIONS :

- Medical Inspection in Schools. Dr. Eli P. Flint.

Discussion opened by Dr. T. F. O'Loughlin, Dr. Thomas F. Rock-  
well, Dr. Frederick W. Walsh.

- Diagnosis of Abdominal Lesions. Dr. Everett J. McKnight, Hartford.

Discussion opened by Drs. Cyrus B. Newton, Eli P. Flint and  
Wright B. Bean.

- Medical Review. Dr. Cyrus B. Newton.

Discussion opened by Dr. Frederick W. Walsh.

## VOLUNTARY PAPERS.





OBITUARIES.



## Edward Charles Beach, M.D., Milford.

Edward Charles Beach, M.D., died at his home in Milford, June 2, 1913, after an illness of only ten days, of pneumonia.

Dr. Beach was born in Seymour, Conn., nearly forty-seven years ago, and received his early education in that town. He was graduated from the Yale Medical School in the Class of 1888. He served for one year in the Hartford Hospital and then started to practice medicine in Milford. He married Charlotte Reynolds of Milford, who, with two sons, survives him.

Dr. Beach was well known in Milford, as well as in his native town, and also in New Haven. He was respected and loved by a large circle of friends and acquaintances. He had a pleasant manner, a cheerful disposition, and a kind word for every one. He made friends easily and he was a true friend, constant and ready to do a kindness or a favor at any time.

He was for a number of years the town physician of Milford, a member of the Milford Yacht Club and of the Milford Club. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association.

## Francis Nelson Braman, M.D., New London.

J. G. STANTON, M.D., AND C. B. GRAVES, M.D., NEW LONDON.

Dr. Francis Nelson Braman was born in Belchertown, Mass., May 18, 1836, the son of Nathaniel Park and Lucy Ann (Crocker) Braman. As a boy he studied in the common and academic schools of his native place, also finding opportunity to indulge his taste for scientific study under private instructors. His life was spent on his father's farm until he was seventeen, when, by the wish of his father, he entered the employ of the Boston Duck Company and spent nearly four years in obtaining a practical knowledge of the art of manufacturing cotton duck, both mechanical and textile. Being naturally inclined to scientific studies, he determined to make the practice of medicine and surgery his life work.

To this end he took a four years' course of study at the Bellevue Hospital Medical College, under such eminent men as Valentine Mott, Austin Flint, the elder, and Fordyce Barker, obtaining his degree in 1866. Immediately on graduation he began the practice of medicine in Salem of this state. Two years later he sought a wider field and took up his residence in New London, where his abilities soon brought him success. Dr. Braman was a member of the City, County and State Medical Associations, in each of which he held the office of president. He was also a member of the American Medical Association. For thirteen years he was surgeon of the 3d Regiment, Connecticut National Guard. He was the sole physician in charge of the Smith Memorial Home as long as he continued in active practice.

He was intensely interested in the building and conduct of the New London Memorial Hospital, for seventeen years being dean of the staff. He was also a trustee of the Manwaring Hospital Association. For six years he was a member of the New London Board of Education and won the regard of the

people of New London not only by his professional work and social qualities, but also by his disinterested efforts to bring the schools of New London to their present high standard. The doctor always had been an active worker in religious circles and was treasurer of the Second Congregational Church and one of the board of deacons. Dr. Braman was one of the foremost men in organizing the Harbour Club of New London, and, being its first president, he contributed largely to the success of that organization of two hundred representative business men.

For the last two years of his life Dr. Braman was in failing health; and in the fall of 1912 he gave up all work and left New London to take up his residence in Florida in the hope that he might regain his health in that milder climate. This hope, however, was not realized, for he lost strength gradually, and on the last afternoon of his life, January 16, 1913, though feeling rather poorly, he strolled about his garden with Mrs. Braman. About half an hour after returning to the house, at the close of the evening meal, while talking to Mrs. Braman, the end came suddenly as he sat in his chair at the table, and he passed painlessly away. Thus ended the life of a just, upright and honorable man; a man of high ideals and a profound sense of duty, a man of deep religious convictions, whose life was an open book, a man who constantly endeavored to fulfill his obligations to his fellow man and his Creator. The community was better for his having lived in it, and he passed to his account followed by the esteem and regret of his fellow citizens and his brother physicians, who were brought in close communion with him. He walked uprightly.

He married, November 26, 1868, Jennie E. (Strickland) Loomis, by whom he had two sons. Mrs. Braman died May 2, 1895. On December 15, 1897, he married his second wife, Lulu M. Tobias of Chicago, Ill.

## Charles Erskine Brayton, M.D., Stonington.

Charles Erskine Brayton, M.D., son of Atwood B. and Sally (Davis) Brayton, died in Stonington after a brief illness, December, 2, 1912, aged 61 years, 9 months and 21 days. He was born and bred in Stonington, receiving his education in the public schools and under the tuition of Dr. David S. Hart, who taught a limited number of pupils, in the higher branches, preparing young men for entrance to college. He studied medicine with Dr. Wm. Hyde of Stonington and entered the College of Physicians and Surgeons in New York City, from which college he graduated in 1873. The Doctor was never married. I quote the following tribute paid to Doctor Brayton's memory from an address made by me at the Stonington Business Men's Club at Brayton Hall, December 26, 1912:

"The Messenger of Death has visited us and summoned one of our prominent and highly-esteemed fellow citizens, the late Dr. Charles E. Brayton. He crossed the river of the silent beyond. I had the pleasure and privilege of knowing him quite intimately from his youth and I have always entertained for him the highest respect and esteem. Dr. Brayton ranked high as an able, skillful and thoroughly honorable and conscientious physician, and he was recognized as one of the Borough's most enterprising, upright and exemplary citizens. The mournful throng that attended the last sad rites which were paid to his memory attested more eloquently than words can express the very high estimation in which he was held by his fellow citizens, and the genuine heartfelt sorrow that prevailed this entire community.

"As his remains were being borne to their last resting place these thoughts and lines came to my mind:

"Shall we meet beyond the river, where the surges cease to roll?

Where in all the bright forever, sorrow ne'er shall press the soul?

Shall we meet with those departed who have bowed beneath death's wave?

Shall we meet the holy myriads who are ransomed from the grave?"



(Reported by Dr. W. Henry Gray, Dr. George D. Stanton, Stonington, Conn.)

WHEREAS, Death once again has invaded our ranks and stricken our brother, Dr. Brayton, co-worker and associate; and

WHEREAS, We, the New London County Medical Association, as an organization and individually mourn our loss because of his close affiliation with us;—therefore be it

*Resolved*, That we regarded Dr. Brayton a man true to the principles of his calling, whose professional life was guided by medical ethics, actively interested in the welfare of the County, State and National Medical Associations;—a man of progressive ideas, yet never discarding the old for the new without good reason, of a deeply sympathetic nature, yet with a keen sense of humor, ever ready to defend the right and denounce the wrong, of a genial disposition and rare ability, who willingly gave of his services to the rich and poor alike. And further be it

*Resolved*, That the Secretary of the New London Medical Association prepare a copy of these resolutions for the press and the immediate family.

DR. W. HENRY GRAY.

## Edwin Taylor Davis, M.D., Ellington.

ELI P. FLINT, M.D., ROCKVILLE.

In the passing of Dr. Edwin T. Davis the medical fraternity loses an honorable member and the town of Ellington a faithful physician and useful citizen.

Edwin Taylor Davis, son of Joseph W. and Betsy McAllister Davis, was born at Richford, Franklin County, Vt., a few miles only from the famous Green Mountains of that State, October 8, 1863.

When six years old, he removed with his parents to Montgomery, in the same county, where he began and completed his preliminary education in the public schools.

He was graduated from the Medical Department of the University of Vermont at Burlington in 1888.

He located for the practice of medicine in Rockville, Conn., but removed to Ellington in January, 1891, where he continued in the practice of his chosen profession until his final illness, his death occurring June 26, 1912.

His wife was Charlotte A. Clapp, daughter of George L. and Harriet Fuller Clapp of Montgomery, Vt. They were married June 15, 1892. Four children were born to them, Harold, Edwin, Mary and Elizabeth, all of whom with his wife and one sister, Mrs. Leander Bosely of Rockville, survive him.

Dr. Davis was unassuming and never sought public preferment, and it proves well the esteem in which he was held, when we know how often the people confided their interests to him.

He had been president of the Village Improvement Society, chairman of the town School Board, and chairman of the Ecclesiastical Society Committee of the Ellington Congregational Church, of which he was a member. He was the first president of the Board of Directors of the Hall Memorial Public Library, and held that office continuously till his death. He was a mem-

ber of Fayette Lodge of Masons, Modern Woodmen of America, and Ellington Grange, town Health Officer and Coroner's Medical Examiner.

A fitting tribute of the esteem and confidence in which he was held is the statement of the Board of Directors of the Hall Memorial Library, published in the last report of the town officers of Ellington:

"It is with deep sorrow that we recall the death of Dr. E. T. Davis, on June 26, 1912, causing a vacancy in the Board of Directors and in the office of President of the Board. Dr. Davis had long been an efficient and interested Director and had served faithfully as President of the Board since the erection of the Library building. The whole community mourn his loss and the Library Directors miss his wise counsel."

Politically, Dr. Davis was a Republican and was elected representative to the State Legislature in 1905, and served during that session, being clerk of the Committee on State Library.

He was a member of the Tolland County Medical Association, of which he had been president and for several years its secretary, also of the Connecticut State Medical Society and the American Medical Association.

Any fair estimate and recital of Dr. Davis' qualities as a man and citizen cannot but be eulogistic; while his success as a physician, the favorable results of treatment of his patients, and the certainty and completeness with which he won and retained their confidence, was much above the average.

Though his frank and rather brusque manner might seem to a stranger to indicate some lack of the gentler and more sympathetic qualities, yet he possessed the ability of inspiring his patients with the hope and courage which is of great therapeutic value, and of leaving with them the impression that they had been visited, not only by a physician in whose hands they would be safe, but by a strong and helpful friend as well, who could understand and appreciate fully their mental as well as physical needs.

In his relations to the profession he was strictly ethical and honorable, and was never known to take unfair advantage of

a brother practitioner, while, firmly but in a charitable, gentlemanly spirit, he criticised whatever he considered as being unfair or unethical in other physicians.

Socially, he met all with a rare freedom from restraint and no one of his acquaintance among the public, or his professional brothers, will ever forget his inexhaustible fund of humorous and pat anecdotes, and his free and ringing laugh. In fact, such an example of perennial cheerfulness in a life of useful activity might be well worthy of emulation.

## Charles James Fox, M.D., Hartford.

JOHN B. MCCOOK, M.D., HARTFORD.

Dr. Charles James Fox, son of Dr. Roswell and Ann Maria (Gager) Fox, was born in Wethersfield, Conn., December 21, 1854.

He graduated from the Hartford High School, class of 1872, and from the Medical Department of the University of New York, February, 1876. He received the appointment of House Physician at the Hartford Hospital, March 1, 1876.

He located in Willimantic in April, 1877, where he acquired a large and successful practice. He was president of, and fellow from, the Windham County Medical Society in 1879, 1881 and 1884. He was chairman of the committee on matters of professional interest to the State Society in 1885, was Medical Examiner for Willimantic for a number of years, a member of the Board of Examining Surgeons of the United States Bureau of Pensions in Willimantic for twelve years, and later served in that capacity in Hartford until his death, the last year of the time being its president. He was Surgeon General of the State on the staff of Governor Phineas C. Lounsbury, 1886-1888.

In 1905 he went to New York and took a special course in dermatology and stomatology. He then located in Hartford and specialized in these branches. He was a member of the Hartford County, Connecticut State and American Medical Associations.

He was twice married; the first time in May, 1886, to Lillian Winslow, daughter of Rev. and Mrs. Horace Winslow of Simsbury. She died the following year.

In 1905 he married Mrs. E. A. Linsley of Willimantic, who survives him, as does also his mother and his brother, Dr. Edward G. Fox of Wethersfield. He died April 17, 1913, of diabetic gangrene, after an illness of less than a week.

When a young man he joined the Congregational Church of Wethersfield and through all the years that followed he identi-

fied himself with a church of that denomination in the various towns of which he became a resident.

The Rev. George L. Clark said in his funeral discourse: "He was full of that hopefulness which moves to do the best, and then hopes for the best. He was chivalrous, tender and unfailing in his devotion to his patients, his home and to the dear ones more precious to him than his life. He had great self-control to bear the hurts and sorrows of others, as well as his own heavy burdens, with a smile and a kindly considerate message for all. This was an achievement costing more than we can imagine to a man who knew for years that the disease was moving toward the citadel, yet was silent and cheerful about it all, even with the most intimate friends, staying in the harness until the week before the tired heart ceased beating, then closing his eyes for the long rest, with words of strength and courage on his lips, brave and smiling to the end."



## Harmon George Howe, M.D., Hartford.

FREDERICK B. WILLARD, M.D., HARTFORD.

Harmon George Howe, for thirty-seven years a practitioner in the art of medicine and surgery in Hartford, Conn., and for the same length of time a member of the Hartford County Medical Association, met his death by accident at Stamford, Conn., June 12, 1913. The accident and the events following it, which culminated in his death, are all too well known to need rehearsal here.

Dr. Howe was born in Jericho, Vt., on September 3, 1850. His early ancestors originally came from Connecticut, but migrated about the beginning of the eighteenth century to Vermont. Among these were the Chittendens and Galushas. Dr. Howe's education was in the district schools of Jericho and, previous to his entry into the Medical Department of the University of Vermont, he attended the Essex Classical Institute of Essex, Vt. His father was very desirous of his becoming identified with some business, and for a time he acted as clerk in the grocery store of Elisha Herrick of Winooski, Vt. The doctor has often told me how he used to make vinegar by pouring water into the brown sugar barrel. The doctor's father always maintained, to the time of his death, that by Harmon's becoming a physician, a good business man had been spoiled. He entered the Medical Department of the University of Vermont in 1870, graduating at the head of his class in 1873. Following his graduation he substituted for a time in the Hartford Hospital and later went to Sanford Hall in Flushing, Long Island, as assistant to the superintendent. While there he continued his medical studies in the College of Physicians and Surgeons in New York, and received his degree as Doctor of Medicine in 1875.

He returned to Hartford and was Medical Assistant to the late Dr. Henry P. Stearns at the Hartford Retreat. On April

12, 1876, he married Miss Harriet M. Stevens of Jericho, Vt., and in the following month he opened his first office on Village Street, in Hartford. He had not been in Hartford long before he was made a member of the Visiting Staff of the Hartford Hospital, and served in that institution long and worthily until the time of his death. For a number of years he was chairman of the Executive Committee and under his directions, the Children's Ward, the Contagious Ward, and Wildwood Sanatorium were built; also the new kitchen, as well as the Nurses' Home. He was, up to the time of his death, president of the Surgical and Medical Staff; also was a member of the Board of Trustees, serving for a time as its president. He also continued his interest in the Hartford Retreat and, for the past ten years, was a member of the Board of Visitors.

Dr. Howe was born and brought up a Baptist in the strictest sense of the word, and, until the last few years was identified with the South Baptist Church. At the death of the late Joseph B. Pierce, he felt that his services were needed more at the Fourth Congregational Church, and he therefore transferred his membership. He was actively engaged in the conduct of its affairs, and was President of the Board of Trustees. It was largely through his efforts that the transfer of the Church property, from the Main Street site to the old Batterson place, was made.

He was also prominent in military affairs, and from 1879 to 1890, he was Assistant Surgeon, and later Surgeon of the First Regiment of the Connecticut National Guard. For the last ten years he was connected with the Governor's Foot Guard as Assistant Surgeon, and Surgeon.

He was an honored President of the Hartford County Medical Association from 1911 to 1912, and also of the Hartford Medical Society. He was greatly interested in the transactions of the Connecticut State Medical Society.

Dr. Howe was very fond of books and almost any week day afternoon, between the hours of two and three, one would find him, sitting in his parlor, reading the latest fiction. He loved to have books about him and his library with its crowded shelves

attested to this fact. He loved to have his medical books about him, as the shelves in his office attested. He was greatly interested in the establishment of the library connected with the Hartford Medical Society. His widow gave his entire medical library to the Society, because of this interest and his oft-repeated wish, although the bequest was not specifically mentioned in his will. By this addition of 500 volumes or more, the library became stronger in surgery than in any other department.

Politically, Dr. Howe was a Republican and always voted the Republican ticket, but at the time of the last Presidential election his interests swerved to those of the Progressive party. He was a great admirer of Theodore Roosevelt.

Dr. Howe certainly had a peculiarly attractive personality. He was greatly beloved by the great majority of his patients. With them, his word was almost law. It is also true that he obtained great success, both as a physician and a surgeon. He never gave up his medical work, and at his death had an extensive family practice.

He was quick in reaching conclusions and often in making diagnoses. It was surprising to me to see how often he was right, although so many times he could present no logical reasoning for his conclusions or diagnoses. As I look back now, it appears to me to be akin to the instinct which comes from ripe experience.

Dr. Howe, to be seen at his best, was to be seen in his home. There was nothing vicious in either act or word. What had to be said was quickly said, and the matter was there ended. He was generous to a fault. A guest was "no stranger within his gates."

Dr. Howe will be greatly missed in all circles, where, by his genial manner, and captivating smile, he made many friends, and scarcely an enemy.

## George Henry Knight, M.D., Lakeville.

STEPHEN J. MAHER, M.D., NEW HAVEN.

When it became known throughout the state on the morning of October 5, 1912, that Dr. George H. Knight of Lakeville was dead, there immediately sounded from every corner of the Commonwealth such mourning as is seldom heard in Connecticut at the death of any citizen, and never within my recollection at the death of any doctor. And yet to many of the members of this State Medical Society of which he was a member, he was not personally known. The younger physicians who asked their elders what great operations Dr. Knight had done, what great discoveries he had made, invariably received as answer, "Not any."

But when the mystified juniors inquired further why Dr. Knight's death was considered such a loss to the state and why Dr. Knight's career was held up to the medical profession of the state as an honor to them and to the state, the answer of the elders was longer and more illuminating.

"Dr. Knight," they said, "was not in private practice. He had not the opportunity that the private practitioners have of making powerful friends of the patients whose sorrows and joys they share. Dr. Knight's patients were four hundred imbecile children, sequestered in a little mountain town in the most inaccessible corner of the state. And yet, such was the genial magnetism of the man, that not only the imbeciles loved him, but everybody in the town loved him. He was with monotonous regularity elected to every office of honor and dignity within the gift of his town. And when his fellow townsmen sent him to represent them in the state legislature, his fellow lawmakers made him chairman of their most important committees and commissions. And in these important offices it was soon seen that the state had in Dr. Knight a vigilant servant who never

dodged an issue; who was never afraid to say No; whose knowledge of medicine combined with his gentle mastery of men, and his familiarity with the technicalities of law-making, gave him opportunity for a unique service to the state; and a servant whose only ambition was to give the best service of which he was capable. So it happened that for many years Dr. Knight earned and received the highest esteem of all the doers-of-things in Connecticut.

"But in this recent grieving for Dr. Knight there was something more than evidence of esteem; in it there was a plaintive moaning strain that mankind reserves for its beloved. Why was he loved more than another? Only God knows. Dr. Knight was tender-hearted. But so are many who are not lovable. And he could and he did lash the man or the measure that he thought unfair. He was courtly of manner and clever of speech, but he preferred a horse race to a banquet. He was a farmer himself and proud of his farmer friends, but he did not hesitate to antagonize many of them in his efforts to keep tuberculous cattle out of the state. He was the active director of the water and power corporation of his town, but he was also the enthusiastic manager of the local baseball team. His constantly growing popularity made him bulk large in recent years among the available candidates for Congress and the governorship of the state, but for twenty-five years and up to the last Sundays of his life, he reverently played the organ in the little Salisbury church. Perhaps these things do not explain why he was more beloved by Connecticut than you are or than we are, but whatever the explanation, such is the fact."

The mere statistical data about Dr. Knight's life are: His full name was George Henry Knight, and he was the son of Dr. Henry Martyn Knight, who founded, and, until his death, conducted the School for Imbeciles at Lakeville, Conn. He was educated in the public schools of East Hampton, Conn., and at the Hopkins Grammar School of New Haven and at the Academic Department of Yale University, Class of 1877, and at the College of Physicians and Surgeons in New York, where he received his degree of M.D. in 1882. He was married in 1879

to Catherine Brannon of New York City, who with their daughter, Miss Gertrude Knight, survives him.

From the time of his graduation until the death of his father in 1885, he served as superintendent of the newly established State Institution for Feeble Minded Children at Faribault, Minn. Upon the death of his father, he returned to Connecticut and took charge of the Lakeville School for Imbeciles, and he continued in this superintendency until his death. He was a member of the A. M. A. and of various societies of alienists. He was Surgeon-General on Governor McLean's staff from 1901 to 1903. He was during the last six years of his life a member of the state legislature and at various sessions of that body was elected chairman of such important committees as those of the Public Health and Safety, the Humane and the Appropriations; his powerful influence had much to do with the enacting of the present laws on compulsory vaccination, the regulating of the sanitary conditions of public places, the restrictions on the importation into the state of tuberculous meat and cattle, the establishment of the Colony for Epileptics, the establishment of a state reformatory, and the establishment of state tuberculosis sanatoria.

At the time of his death he was a member of the State Board of Pardons and Chairman of the State Tuberculosis Commission. At the Republican State Convention in 1912, he was strongly urged as a candidate for the nomination for the governorship of the state; but he withdrew in favor of Judge John P. Studley. A few days later he received the unanimous vote of the Republican Convention for the nomination for Congressman from the Fifth District. He had suffered for some time from heart weakness, and on the evening of October 4, 1912, while addressing an enthusiastic political meeting of his neighbors in Lakeville, he fell dead on the platform.



## Nathan Mayer, M.D., Hartford.

OLIVER C. SMITH, M.D., HARTFORD.

"Dr. Nathan Mayer—May the kind gifts of God and the best successes of manhood be with you for many happy years. I drink for you all."

So spoke Dr. Mayer on accepting the loving-cup from the Hartford Medical Society a year ago on New Year's Day. That loving-cup was to him a symbol of the virtues of his brothers in medicine, Dr. Gurdon W. Russell and Dr. Horace Fuller, who had held it before him, and whose successor he was proud to be in this, perhaps, the crowning moment of his life.

Whatever may be said, and much has been said and written of Dr. Mayer, his army service, his literary work and his achievements in medicine, it was his love of humanity, his enthusiasm for the noble and beautiful which endeared him to his fellow-men.

No one in these later years who saw him leaning on the arm of his attendant, making his slow progress down the long aisle of Parsons Theater, a progress most trying to his sensitive soul, could realize, unless they knew him well, how, when the strains of a Wagner prelude or the impassioned utterances of a great actor burst upon his ears, how all the aches and pains of his weary body were forgotten and he was born anew in a land of poetry and romance; truly he had the vision.

For over forty-one years he was dramatic and musical critic of the *Hartford Times*, and by a host of readers, not only in this city but throughout the state, his opinions were eagerly read and relied upon as an unfailing source of interest and inspiration.

His advice to many an inspiring young author or musician was often the turning point in a career, and if he had, perforce, sometimes to tell disagreeable truths, it was done with such a nicety of sympathy the recipient could not but accept it in the spirit in which it was given.

Dr. Luther, President of Trinity College, has written a glowing tribute to Dr. Mayer of his kindness to the students—Dr. Luther himself was one, from his advent among them in the late sixties—of his attending them without charge, of his interest in their studies and of his help in their themes.

Dr. Mayer was very fond of children; he glorified them in his imagination, and in his visits to a sick child the medicine was sweetened by a flower or a fruit, or best of all some marvelous tale from his stores of anecdotes or personal experience.

His personal experience brings one to his years of army life, whether caring for the wounded, or for yellow fever patients, or planning the capture of food for the starving, or clothes for the naked, he was at once the friend and physician, versatile and resourceful as to remedies, not only for the hurt bodies but for the stricken souls. As an instance of his various duties, Dr. Mayer once said that he had in his possession at one time two trunks filled with watches and other valuables which were left in his care by the dying men.

Nathan Mayer was born in Bavaria, Germany, on Christmas Day, 1838. It was his delight to dispense gifts to young and old, and on many days preceding his birthday he could have been seen driving about the city in his little two-seated carriage laden with gifts, the distributing of which was as great a pleasure to the giver as to the recipient.

He came to this country with his parents when ten years old, graduated from the Cincinnati Medical College, studied in Munich, Vienna, Prague and Paris, returning to Hartford in 1861.

In 1862 he enlisted in the 11th Regiment Conn. Vols., and in 1863 was appointed Sergeant of the 16th Regiment and served through the war. He was in the battle of Suffolk, and the great engagements of Antietam, South Mountain and Fredericksburg, and at Plymouth, N. C., he was taken prisoner with the greater part of his regiment. He, himself, had yellow fever, and owing to the spread of the disease he assumed his duties before he had fully recovered.

From 1865 up to the time of his last illness he engaged in the practice of medicine in Hartford. The late Dr. J. J. Morrissey of New York, Dr. F. S. Mandelbaum of Mt. Sinai Hospital of New York City, the late Dr. James A. Campbell, Dr. J. A. Kilbourn, and Dr. Charles S. Stern of this city studied under him. He was appointed Surgeon-General on the staff of Governor Marshall Jewell in 1885, and he was made a member of the Board of United States Pension Examiners, of which he was president at the time of his death. He had been on the staff at St. Francis Hospital since its foundation in 1897. He was President of the Hartford Medical Society in 1906, and in 1902 he was also President of this your Hartford County Medical Association.

He died July 10, 1912, at the Hartford Hospital, where he had been since the preceding April. For months his health had been gradually failing, and heart disease was the immediate cause of death. At his funeral held at the Synagogue of the Congregation Beth Israel on July 12, his comrades, his brother physicians, his associates on the *Hartford Times*, and a host of friends gathered. The service was conducted by the Rev. Harry E. Ettelson, who delivered the eulogy, and by the Rev. Dr. Meyer Elkin, Rabbi Emeritus, and for half a century Dr. Mayer's warm personal friend, read the prayers. The flowers were a peculiarly appropriate tribute. Dr. Mayer's friends realized his great love of nature, and especially as he grew older his drives in the country and his expeditions for flowers were a never-ending delight, a pleasure which he shared with the readers of the *Times*; nor were the strains of the Beethoven Funeral March played at the close of the funeral less fitting for one who knew and loved the Master Musician as few do.

And so he has passed from our midst full of honors. The lesson of his life can be read by all. Coming to Hartford, an unknown foreigner, with few introductions, he rose to distinction in literature, medicine, and in the service of his adopted country. The keynote of it all was his love of and his interest in his fellow-men.

He left what would be considered by the doctor of average experience a fortune, but his truest wealth lies in the heart of his friends.

"O small beginnings, ye are great and strong,  
Based on a faithful heart and weariless brain:  
Ye build the future fair, ye conquer wrong,  
Ye earn the crown, and wear it not in vain."

## Charles Reed Pratt, M.D., Bridgeport.

FRANK M. TUKEY, M.D., BRIDGEPORT.

Charles Reed Pratt, M.D., was born in New Haven, Conn., on April 9, 1880, the only son of Charles and Harriett (Reed) Pratt. He was educated in the schools of his native city, graduating from the New Haven High School. His medical degree was obtained in Yale University Medical School in 1905. After serving one year as interne at the State Hospital in Middletown, Conn., he was appointed to the resident staff of the Bridgeport Hospital. Having completed the regular required service in this institution with credit, he decided to locate in Bridgeport, Conn., where he practiced his chosen profession until his death, which occurred on July 16, 1913.

Dr. Pratt received an appointment to the staff of the Emergency Hospital, Department of Charities, in April, 1912, and it was in the performance of his duties in this work that he acquired the illness which eventually caused his death. A neglected throat, from which subacute ulcerative endocarditis developed, closing a promising career.

He was a member of the American Medical Association, the Connecticut State Medical Society and the Fairfield County Medical Association, and at his death was curator of the Bridgeport Medical Association.

He married Miss Margaret E. Patterson of New Brunswick, Canada, in January, 1912, who survives him.

A few brief years only were allotted to Dr. Pratt in which to pursue his life work, but they were years of promise, satisfaction and progress; years teeming with good cheer and kindness for his fellow man.

He displayed a fondness for the quiet enjoyment of the duties and obligations of life, together with a keen sense of his responsibilities to his neighbor and brother. He was in every way kind-hearted, genial and companionable in disposition, and an

intimate acquaintance best revealed his many lovable qualities. His character was of the highest; his personality won him confidence, friendship and affection.

While Dr. Pratt's vocation was medicine, his main avocation was music, and he found it a source of unfailing recreation and keen delight.

His untimely death is a distinct loss to the medical profession, to the community and to this Society.



## Myron Winslow Robinson, M.D., Noroton Heights.

N. E. WORDIN, A.M., M.D., BRIDGEPORT.

Myron Winslow Robinson was born in the town of Lebanon, May 4, 1839. His father was William Robinson, descendant of John Robinson of early American history, minister of the Pilgrim Fathers. His mother was Sophia Robbins. The greater part of his life was spent among rural scenes. His early school training was at the Academy at Ellington, Tolland County, the population of which town was 1,452. He began the study of medicine at Hebron in 1858, and graduated at the Berkshire Medical College in 1860. This college, among the earlier medical institutions of New England, has now passed out of existence, and among the nine hundred members of the Connecticut State Medical Society there is only one remaining who received his diploma from it. It may be noticed that the curriculum of this institution embraced only two years. We have indeed made progress in medical education.

Dr. Robinson went back to Hebron to begin the practice of medicine, although the town at that time could not have had a population of more than a thousand, scattered over the hills. It may not seem strange then, that with the military spirit burning at fever heat throughout the land he became fired, like all the rest, and went to the war. He enlisted as a private in Company C, Eighteenth Regiment, Connecticut Volunteers. Connecticut had at that time, as an inducement to men to enlist, appealed to local pride and had adopted the method of raising regiments by counties. The Eighteenth Regiment was the New London County regiment, Tolland County probably being too small to undertake the raising of a regiment by itself. The Colonel of the Eighteenth was William G. Ely of Norwich. Strangely enough and by quite a coincidence, Colonel Ely was taken from the Sixth Regiment and made Colonel of the Eighteenth, while Dr. Robinson, who enlisted in the Eighteenth, afterward appeared as Assistant Surgeon of the Sixth. The

Captain of Robinson's company, C, was Isaac H. Bromley, who afterward became a distinguished litterateur, noted as a writer on the staff of the New York *Tribune*, and a delightful essayist. Doctor Charles Monro Carleton was the Surgeon of this regiment. The name of Dr. Carleton was at that time paramount among the medical men of that portion of the State and shortly after his arrival near the scene of action he was made Acting Brigade Surgeon of Hospitals and Defences at Baltimore.

The Record of the Eighteenth Regiment says that Myron W. Robinson was discharged upon August 16, and enlisted in the United States Army, November 16. By this he gained a promotion to the much more agreeable position of Hospital Steward, and in the regular army service.

Here, of course, his medical knowledge came greatly to his help, as it was his medical knowledge which had gained the position for him, and it was, too, in the direct line of his life work. But this was only the beginning of further promotion. Dr. Samuel McClellan of New Haven, the Second Assistant Surgeon of the Sixth Regiment, was discharged from the service January 6, 1863, and May 11 of the same year Dr. Robinson was commissioned to fill his place. Dr. F. L. Dibble, Surgeon of the Sixth, left the Army at the expiration of his term of service and Dr. Robinson was commissioned Surgeon in full, on December 21. He was mustered out of the service with his regiment at Raleigh, N. C., August 21, 1865. His period of service in the army, therefore, embraced a period of three years and three days. With the Sixth Regiment he experienced hard and trying service. Two months after he joined the regiment the men were called upon for and were engaged in the terrible night assault upon Battery Wagner on Morris Island. In that encounter one hundred and forty-one of the regiment were killed, wounded or missing. Upon May 6, 1863, the regiment landed at Bermuda Hundred and was engaged in the operations about Richmond, especially Drury's Bluff, Deep Bottom and in the trenches about Petersburg, until near the close of the war.

Later, it was detached and sent, under General Terry, against Fort Fisher. This, the largest earth fortification in the Southern

Confederacy, stood at the mouth of Cape Fear River, and guarded the city of Wilmington, N. C., which had come to be the last port of supply for what was soon to be the lost cause. General Lee had said, if Fort Fisher was not held, his army could not subsist. The fort had been pronounced impregnable but it was captured by assault on January 14, 1865, but not without severe loss to our forces,—110 killed, 536 wounded. So that the surgeon of such a regiment found plenty to do.

The war was now nearly over. Dr. Robinson spent the summer at Goldsboro and was mustered out at Raleigh, N. C., August 21, 1865. Dr. Robinson did not return North with the discharged men whom he had zealously attended and to whom he was very much attached, but remained in Wilmington in charge of the Hillhouse Hospital in that town, not yet tired of ministering to the sick. Later he returned to his native State and settled in Colchester, a town adjoining the one in which he was born. Here was a better field—a population of some three thousand souls and the celebrated Bacon Academy. Since that time a railroad has been built through the place and a large rubber factory has increased the size and the activities of the country town. The Doctor always took pleasure in telling of his experiences here and of his long rides seven or eight miles away.

In 1867 Dr. Robinson married Miss Emma J. Stewart, the daughter of Ralph Stewart of Portland. She was a congenial companion and a faithful helpmate. Three children were born to them, of whom two still survive. A son, Harry, lived but a few days. The other son and daughter are now living together in West Haven. There are three grandchildren. Mrs. Robinson went to the better land May 23, 1909, since which time the Doctor had been cared for by his daughter, but he never failed to miss and to mourn for the tender care and constant companionship of her who had so long been a partner in all his experiences.

In 1899 he was appointed Surgeon in charge of the Soldiers' Home at Noroton. His entire life was thus changed by coming out of a country practice with its long tedious rides, its exposure to all weathers and its service day and night, to the in-door life

of institutional work. It was trying, too, because a majority of those with whom he had to deal now were old men of formed and often irregular habits, who expect in a home freedom from restraint; men who were often dissipated, sometimes perhaps a little ugly, and his task was all the harder because he had had for a predecessor Dr. William H. Brownson, a man full of suavity, always the gentleman in appearance and manner, a man of address and of popular traits. But Dr. Robinson's hard common sense, his equipoise, his tact, his sense of humor were all-sufficient and the men came to be very much attached to him. His army record also contributed much to this hold he had upon the men. They went to him for advice on their personal and financial affairs, and he was always ready to help them. Kindly and considerate, tactful and resourceful, he filled a trying position. The old soldiers became much attached to him and when by intrigue the scheming friend of one higher up sought to supplant him the veterans all over the State arose in protest and the Doctor remained secure in his position.

Doctor Robinson was a product of the State of Connecticut. In Lebanon, his birthplace, a town of about fifteen hundred people, he spent the first twenty-three years of his life. For sixteen years he was serving the State directly in caring for her defenders in the field or housed in the State Home. For twenty-four years he was ministering to the suffering, climbing the long hills of Colchester, buffeting the storms, enduring the cold day and night, year in and year out, for the high and the low, the rich and the poor, the young and the old, never shirking, never flinching; aye, scarcely ever complaining. He was no man for dress parade; there was nothing of the show about him. He was full of humanity and could give reasons for the faith which was in him. He was a good companion and was fond of narrating his experiences. A good observer of symptoms, he had become solicitous about himself. He came to be short of breath on exertion, and sought a specialist of New York who took his blood-pressure, treated him for heart disease and enjoined rest. He went to Washington, D. C., and after a week resumed both active duty at the Home and active social life.

One who knew him well suggests that Dr. Robinson knew his condition and preferred that his life should end in his accustomed activity rather than he should lie by and be invalided. He was found dead in bed by his daughter when she went to his room to call him on the morning of May 27.

"After life's fitful fever he sleeps well." He enjoyed the companionship of his fellows and held membership in the following societies: Loyal Legion, of New York; Worcester Lodge, No. 30, F. A. M., of Colchester; Ancient Order United Workmen and American Mechanics; Norwalk Post, G. A. R.; the Connecticut State Medical Society and the Fairfield County Medical Association. In 1895 he became President of the New London County Medical Association, which made him one of the Vice Presidents of the State Medical Society, and at the time of his death he was the Medical Director of the G. A. R., Department of Connecticut. He was buried at Colchester.

## Harriet Adaline Thompson, M.D., Bridgeport.

HENRY S. MILES, M.D., BRIDGEPORT.

Dr. Harriet Adaline Thompson died of cerebral hemorrhage, at her home in Bridgeport, April 18, 1913, in the seventieth year of her age.

When about thirty, she married Lauriston Thompson of Ansonia; soon afterward he became ill and was an invalid for eighteen years before his death.

While caring for her husband Mrs. Thompson became interested in medicine and entered the Woman's Medical College of Philadelphia.

It was necessary for her to study hard as she was obliged to look after her house and her patient at the same time, but after a four years' course, she graduated, with honor, in 1893, when she was fifty years old.

Dr. Thompson was especially interested in gynecology and was offered an assistantship in the hospital in Philadelphia, but decided to begin practicing at once, and located in Bridgeport.

She was licensed in 1893 and was made a member of this Society in 1896.

Dr. Thompson was rather averse to obstetrics and to going about at night, so her practice was, in the main, limited to office work.

She had many very stanch friends among the women of Bridgeport. The Doctor did not attempt much surgery but freely called upon her medical brethren for advice and help; and often stated that no physician in Fairfield County had ever treated her otherwise than with courtesy and respect.

A regular attendant at the meetings of the Bridgeport Medical Association, she often took part in the discussions.

Deeply concerned in the welfare of Bridgeport and all that made for its betterment, she organized the Civic Club and was president for several years, holding this office at the time of her death.



Through her efforts many trees were given to the various schools to be planted in their grounds.

A clean city, a sane Fourth and the doing away with the ringing of bells and all unnecessary noises were among her hobbies.

Being a woman with strong convictions and great courage these things were advocated by her at all opportune times among her friends, and before societies and the Common Council, as well.

Dr. Thompson spent much time and energy during the months previous to her death in preparing a bill to provide for the castration of all men convicted of committing rape.

She secured petitions and resolutions favoring the passage of the measure from nearly all the women's organizations in Connecticut.

This bill was introduced in the session of 1913, reported favorably by the Committee to which it was referred, but was killed in the House of Representatives.

Dr. Thompson was a prominent member of the South Congregational Church, the D. A. R., the Order of the Eastern Star, the Associated Charities and one of the leading spirits in the formation of the Girls' Club.

Her best efforts were given toward the furtherance of all things that contribute to the benefit and advancement of womankind.



MEMBERS OF THE  
CONNECTICUT STATE MEDICAL  
SOCIETY.

...



## MEMBERS OF THE SOCIETY.

### HONORARY MEMBERS.

THOMAS ADDIS EMMETT.....	New York City, N. Y.
WILLIAM HENRY WELCH.....	Baltimore, Md.
ROBERT FULTON WEIR.....	New York City, N. Y.
HON. CHARLES E. GROSS.....	Hartford, Conn.
DAVID WEBSTER.....	New York City, N. Y.
SIR JAMES GRANT.....	Ottawa, Canada.
HENRY O. MARCY.....	Boston, Mass.
T. MITCHELL PRUDDEN.....	New York City, N. Y.
WILLIAM W. KEEN.....	Philadelphia, Penn.
J. W. S. GOULEY.....	New York City, N. Y.
REYNOLD WEBB WILCOX.....	New York City, N. Y.
WILLIAM OSLER.....	Oxford, England.
GEORGE M. STERNBERG.....	Washington, D. C.
FRANCIS DELAFIELD.....	New York City, N. Y.

## ACTIVE MEMBERS.

The names of those who have been Presidents are in capitals.

### HARTFORD COUNTY.

JOHN F. DOWLING, M.D., Hartford, *President*.

WILLIAM R. MILLER, M.D., Southington, *Vice President*.

ALBERT R. KEITH, M.D., Hartford, *Secretary*.

*Councilor*—OLIVER C. SMITH, M.D., Hartford.

*Censors*—GEORGE N. BELL, M.D., FREDERICK B. WILLARD, M.D.,  
GEORGE H. BODLEY, M.D.

Annual Meeting, First Tuesday in April; Semi-Annual Meeting,  
Fourth Tuesday in October.

#### Hartford:

David Crary .....	926 Main Street.
John B. Lewis.....	700 Main Street.
Gustavus P. Davis.....	30 Woodland Street.
Charles E. Froelich.....	255 Trumbull Street.
William W. Knight.....	254 Trumbull Street.
Thomas D. Crowthers.....	142 Fairfield Avenue.
Ellen H. Gladwin.....	705 Asylum Avenue.
Frederick S. Crossfield.....	75 Pratt Street.
William D. Morgan.....	49 Pearl Street.
John F. Axtelle.....	635 Main Street.
George K. Welch .....	26 State Street.
Phineas H. Ingalls.....	49 Pearl Street.
Edward K. Root.....	49 Pearl Street.
John Howard.....	331 Trumbull Street.
Charles D. Alton.....	75 Pratt Street.
Oliver C. Smith.....	44 High Street.
Joseph E. Root.....	67 Pearl Street.
William Porter, Jr.....	179 Allyn Street.
Frederick T. Simpson.....	122 High Street.
George R. Miller.....	51 Church Street.



Charles C. Beach.....	125	Trumbull Street.
Gideon C. Segur.....	67	Farmington Avenue.
George C. Bailey.....	65	Church Street.
Alva E. Abrams.....	36	Pearl Street.
Charles E. Taft.....	98	High Street.
Thomas F. Kane.....	517	Main Street.
Arthur J. Wolff.....	904	Main Street.
Ansel G. Cook.....	179	Allyn Street.
Edwin A. Down.....	902	Main Street.
Daniel F. Sullivan.....	64	Church Street.
EVERETT J. McKNIGHT.....	110	High Street.
Benjamin S. Barrows.....	164	High Street.
Michael A. Bailey.....	434	Main Street.
George N. Bell.....	44	High Street.
Frank L. Waite.....	68	Pratt Street.
Charles S. Stern.....	75	Pratt Street.
Franklin L. Lawton.....	295	Main Street.
John H. Rose.....	75	Pratt Street.
John B. Waters.....	281	Trumbull Street.
Joseph B. Hall.....	36	Pearl Street.
Edward O. Elmer.....	805	Park Street.
Janet M. Weir.....	282	Sigourney Street.
John F. Dowling.....	1315	Main Street.
Philip D. Bunce.....	98	High Street.
Wilton E. Dickerman.....	125	Trumbull Street.
John B. Boucher.....	25	Charter Oak Avenue.
Levi B. Cochran.....	50	Farmington Avenue.
James H. Naylor.....	1	Main Street.
Charles P. Botsford.....	1337	Main Street.
James H. Standish.....	340	Windsor Avenue.
Michael H. Gill.....	36	Pearl Street.
John B. McCook.....	390	Main Street.
John W. Felty.....	902	Main Street.
Thomas W. Chester.....	110	High Street.
Joseph A. Kilbourn.....	271	Park Street.
Thomas B. Enders.....	3	Highland Street.
Charles A. Goodrich.....	5	Haynes Street.
Alfred M. Rowley.....	53	Main Street.
Irving DeL. Blanchard.....	73	Windsor Avenue.
Emil G. Reinert.....	109	Ann Street.
Heman A. Tyler, Jr.....	686	Main Street.
Frederick L. McKee.....	68	Pratt Street.
Edward R. Lampson.....	125	Trumbull Street.
E. Terry Smith.....	70	Cone Street.

William H. FitzGerald.....	904	Main Street.
Emma J. Thompson.....	287	Trumbull Street.
Patrick J. Ryan.....	316	Park Street.
Walter R. Steiner.....	4	Trinity Street.
Ellen P. O'Flaherty.....	140	Main Street.
C. Brewster Brainard.....	98	High Street.
Eckley R. Storrs.....	179	Allyn Street.
Ernest A. Wells.....	2	Garden Street.
William H. Van Strander.....	61	Church Street.
James H. Conklin.....	89	Pratt Street.
Orin R. Witter.....	44	High Street.
Frederick B. Willard.....	80	Church Street.
Henry E. Adams.....	194	High Street.
William T. Owens.....	703	Main Street.
John C. Pierson.....	50	Windsor Avenue.
Henry F. Stoll.....	75	Pratt Street.
Paul P. Swett.....	803	Main Street.
Mark S. Bradley.....	36	Pearl Street.
Harry C. Clifton.....	98	High Street.
Robert S. Starr.....	75	Pratt Street.
Arthur C. Heublein.....	110	High Street.
Whitefield N. Thompson.....	30	Washington Street.
Maude W. Taylor.....	107	Edwards Street.
James J. Boucher.....	429	Capitol Avenue.
Isaac W. Kingsbury.....	36	Pearl Street.
Edward J. Turbert.....	18	New Park Avenue.
Patrick F. McPartland.....	1341	Main Street.
Thomas F. Welch.....	356	Windsor Avenue.
James C. Wilson.....	164	High Street.
Robert L. Rowley.....	98	High Street.
Horace C. Swan.....	11	Lincoln Street.
Otto G. Wiedman.....	377	Albany Avenue.
Thomas N. Hepburn.....	42	High Street.
Henry A. Martelle.....	112	High Street.
Charles T. Beach.....	686	Main Street.
Edward H. Blair.....	389	Main Street.
James W. Ward.....	437	Capitol Avenue.
George F. Vail.....	36	Pearl Street.
Clarence M. Hatheway.....	110	High Street.
Albert R. Keith.....	43	Farmington Avenue.
Joseph P. Ryan.....	44	Church Street.
Arthur H. Griswold.....	42	Church Street.
David J. Molumphy.....	517	Main Street.
Morris Tuck.....	16	Village Street.

John B. Griggs.....	772	Asylum Avenue.
Andrew M. Outerson.....	104	Church Street.
Charles H. Borden.....	36	Pearl Street.
James F. Rooney.....	308	Park Street.
Henry Bickford.....	111	Ann Street.
Paul Waterman .....	44	High Street.
William B. Bartlett.....	148	High Street.
Howard B. Haylett.....	158	High Street.
Domenico DeBonis.....	94	Windsor Avenue.
Calvin Weidner .....	904	Main Street.
Jeremiah E. McSweeney.....	207	Main Street.
John C. Rowley.....	50	Farmington Avenue.
Paul Plummer.....	68	Pratt Street.
William E. McClellan.....	125	Trumbull Street.
Henry Altshul.....	902	Main Street.
Henry C. Russ.....	114	Woodland Street.
Louis Simonson.....	1273	Main Street.
Dwight W. Tracey.....	5	Wethersfield Avenue.
Albert E. Cobb.....	904	Main Street.
Abraham Fischer.....	149	Windsor Avenue.
Walter G. Murphy.....	275	Farmington Avenue.
Richard J. Dwyer.....	186	Franklin Avenue.
Howard W. Brayton.....	44	High Street.
Henry G. Jarvis.....	98	High Street.
Philip T. Kennedy.....	64	Ann Street.
Robert M. Yergason.....	902	Main Street.
Leon I. Madden.....	36	Pearl Street.
Amos T. Harrington.....	17	Russ Street.
Julius L. Birdsong.....	110	High Street.
Frank J. Ronayne.....	66	Church Street.

**Avon:**

Vernon H. C. Morse.

**Berlin—EAST BERLIN:**

Thomas C. Hodgson.

**Bloomfield:**

Thomas H. Denne.

**Bristol:**

Arthur S. Brackett.  
Timothy G. O'Connell.

Wm. M. S. Curtiss.  
Benedict N. Whipple.  
William W. Horton.

**FORESTVILLE:**

B. F. Donahue.

**Canton—COLLINSVILLE:**

George F. Lewis.  
Ralph B. Cox.  
George W. Eddy.  
S. S. S. Campbell.

**East Hartford:**

Thomas S. O'Connell.  
Franklin H. Mayberry.  
Edward H. Truex.

**East Windsor—BROAD BROOK:**

Howard O. Allen.  
Harold S. Backus.

**Enfield—THOMPSONVILLE:**

George T. Finch.  
Henry G. Varno.  
Michael J. Dowd.  
John L. Bridge.  
Thomas G. Alcorn.

**HAZARDVILLE:**

Simon W. Houghton.

**Farmington:**

Stuart E. Phelps.

**UNIONVILLE:**

Michael J. Morrissey.  
William T. Morrissey.

**Glastonbury:**

Charles G. Rankin.  
William S. Kingsbury.

**SOUTH GLASTONBURY:**

Henry M. Rising.  
Harry B. Rising.

**Manchester:**

Harry R. Sharpe.

**SOUTH MANCHESTER:**

Thomas H. Weldon.  
William S. Gillam.  
Noah A. Burr.  
Thomas G. Sloan.  
George W. May.  
William R. Tinker.  
Richard W. Rice.

**New Britain:**

George Clary.  
Erastus P. Swasey.  
Michael J. Coholan.  
Lawrence M. Cremin.  
(Bridgeport)

Robert M. Clark.  
Hermann Strosser.  
Kenneth E. Kellogg.  
Thomas E. Reeks.  
Ernst T. Fromen.  
Catherine H. Travis.  
Theodore G. Wright.  
Maurice W. Maloney.  
John Purney.  
George H. Bodley.  
Samuel W. Irving.  
William W. Brackett.  
Joseph H. Potts.  
Arvid Anderson.

**Wethersfield:**

Edward G. Fox.  
Arthur W. Howard.

**Windsor:**

Howard F. King.

**Plainville:**

John N. Bull.

**Rocky Hill:**

Oran A. Moser.  
Julius E. Griswold.

**Simsbury:**

John P. Carver.

**TARIFFVILLE:**

Charles M. Wooster.

**Southington:**

Willard G. Steadman.  
William R. Miller.

**South Windsor:**

Henry A. Deane.  
Mary S. Tudor. (Burnside)

**Suffield:**

Joseph A. Gibbs.  
Arthur P. Noyes.

**WEST SUFFIELD:**

William E. Caldwell.

**West Hartford:**

Charles O. Purinton.  
Edwin B. Lyon.  
Ralph W. E. Alcott.

**Windsor Locks:**

Joseph A. Coogan.  
William J. Coyle.  
Myron P. Robinson.  
Richard A. Outerson.

Total Number, 217.

**NEW HAVEN COUNTY.**

THOMAS M. BULL, M.D., Naugatuck, *President*.

HENRY G. ANDERSON, M.D., Waterbury, *Vice President*.

WILLIS E. HARTSHORN, M.D., New Haven, *Secretary*.

*Councilor*—WILLIAM H. CARMALT, M.D., New Haven.

*Censors*—STEPHEN J. MAHER, M.D., EDW. T. BRADSTREET, M.D.,  
LOUIS M. GOMPERTZ, M.D.

Annual Meeting, Third Thursday in April; Semi-Annual, Third  
Thursday in October.

**New Haven:**

Frederick A. Ruickoldt.....71 Olive Street.  
Frederick Bellosa.....223 York Street.  
WILLIAM H. CARMALT.....261 St. Ronan Street.  
T. H. Russell.....137 Elm Street.  
F. H. Whittemore.....69 Elm Street.  
C. P. Lindsley.....196 York Street.  
Henry Fleischner.....928 Grand Avenue.  
M. Mailhouse.....45 Elm Street.  
M. C. O'Connor.....882 State Street.  
C. E. Park.....42 Elm Street.  
Gustavus Eliot.....209 Church Street.  
J. E. Stetson.....Union League Club.  
J. F. Luby.....1210 Chapel Street.  
W. W. Hawkes.....35 High Street.  
F. H. Wheeler.....27 Perkins Street.

B. L. Lambert.....	578 Howard Avenue.
F. W. Wright.....	48 Pearl Street.
O. T. Osborne.....	252 York Street.
L. C. Peckham.....	141 Greene Street.
L. S. DeForest.....	335 Orange Street.
Henry L. Swain.....	232 York Street.
Mary B. Moody.....	Sherland Avenue.
G. F. Converse.....	1 Whalley Avenue.
J. H. Townsend.....	62 Trumbull Street.
C. J. Foote.....	26 Elm Street.
S. J. Maher.....	212 Orange Street.
J. W. Seaver.....	25 Lynwood Place.
Louis B. Bishop.....	356 Orange Street.
H. W. Ring.....	187 Church Street.
W. C. Welch.....	44 College Street.
A. O. Baribault.....	209 Chapel Street.
E. M. McCabe.....	287 Orange Street.
James M. Reilly.....	337 Cedar Street.
C. E. Skinner.....	331 Temple Street.
B. Austin Cheney.....	404 Whitney Avenue.
Charles A. Tuttle.....	196 York Street.
H. B. Ferris.....	395 St. Ronan Street.
Leonard W. Bacon.....	113 Whitney Avenue.
P. S. Robinson.....	164 Grand Avenue.
Arthur N. Alling.....	257 Church Street.
R. A. McDonnell.....	1142 Chapel Street.
E. P. Pitman.....	52 Sylvan Avenue.
Isaac N. Porter.....	198 Dixwell Avenue.
E. H. Arnold.....	46 York Square.
Robert E. Peck.....	Elm City Private Hospital.
William C. Wurtenberg.....	28 Elm Street.
F. N. Sperry.....	33 College Street.
W. F. Verdi.....	13 Elm Street.
C. J. Bartlett.....	150 York Street.
M. D. Slattey.....	566 Howard Avenue.
W. H. Sanford.....	60 Edwards Street.
Leonard C. Sanford.....	347 Temple Street.
Willis H. Crowe.....	106 Whalley Avenue.
C. H. Robbins.....	326 Grand Avenue.
L. M. Gompertz.....	1195 Chapel Street.
Alfred G. Nadler.....	377 Orange Street.
Frederick C. Bishop.....	1241 Chapel Street.
James H. J. Flynn.....	840 Howard Avenue.
Frank A. Kirby.....	355 Whalley Avenue.

William J. Sheehan.....	1226	Chapel Street.
John F. Sullivan.....	205	Blatchley Avenue.
Edward F. McIntosh.....	192	York Street.
Nicola Mariani.....	119	Greene Street.
James S. Maher.....	215	Orange Street.
A. W. Marsh.....	1012	Whalley Avenue.
W. N. Winne.....	1020	Whalley Avenue.
William S. Barnes.....	193	York Street.
Clarence L. Kilbourn.....	202	Blatchley Avenue.
Henry H. Smith.....	43	Elm Street.
Julia E. Teele.....	206	Hamilton Street.
Harry L. Welch.....	44	College Street.
Otto G. Ramsay.....	251	Church Street.
Thomas V. Hynes.....	1441	Chapel Street.
H. M. Steele.....	226	Church Street.
Willis E. Hartshorn.....	1138	Chapel Street.
Richard F. Rand.....	246	Church Street.
Edward S. Moulton.....	237	York Street.
Timothy F. Cohane.....	530	Howard Avenue.
W. J. Butler.....	712	Howard Avenue.
Louis A. Notkins.....	700	Howard Avenue.
T. S. McDermott.....	1334	Chapel Street.
Francis H. Reilly.....	286	Columbus Avenue.
Nelson A. Ludington.....	1252	Chapel Street.
D. M. Lewis.....	36	High Street.
Seymour L. Spier.....	348	Crown Street.
William H. Bean.....	40	Pleasant Street.
E. Reed Whittemore.....	69	Elm Street.
Alice P. Ford.....	1302	Chapel Street.
Francis N. Boynton.....	46	York Square.
Frank B. Standish.....	310	Elm Street.
Carl W. Henze.....	22	Trumbull Street.
Eugene M. Blake.....	15	Elm Street.
George Blumer.....	64	Trumbull Street.
Rollin McNeil.....	149	Bradley Street.
Samuel M. Hammond.....	125	College Street.
Archibald C. Herbert.....	256	McKinley Avenue.
Mary P. Dole.....	15	Elm Street.
Treby W. Lyon.....	1210	Dixwell Avenue.
Frederick P. Lane.....	524	Chapel Street.
Harold S. Arnold.....	122	College Street.
Allen R. Diefendorf.....	29	College Street.
William J. Barrett.....	63	Olive Street.
Herman P. Hessler.....	323	George Street.



Millard F. Allen.....	65 Dixwell Avenue.
Frederick G. Beck.....	199 York Street.
Raynham Townshend.....	233 Church Street.
Jeremiah J. Cohane.....	29 College Street.
Frank L. Phillips.....	413 Temple Street.
Charles Fitzgerald.....	220 Orange Street.
Charles E. Sanford.....	150 Shelton Avenue.
John A. Murphy.....	28 Edwards Street.
James F. Rogers.....	378 George Street.
Wilder Tileston.....	424 Temple Street.
Marvin M. Scarbrough.....	76 Wall Street.
Joseph I. Linde.....	163 York Street.
Jeremiah B. Sullivan.....	274 Dixwell Avenue.
Robert G. Tracy.....	493 Howard Avenue.
Joseph M. Flint.....	320 Temple Street.
Jacques L. Buttner.....	763 Orange Street.
Hugh F. Keating.....	619 Howard Avenue.
Alexander Bergman.....	157 Bradley Street.
Albertus K. Boardman.....	416 Forbes Avenue.
Samuel J. Goldberg.....	314 George Street.
Israel Kleiner.....	193 York Street.
Abram A. Hershman.....	6 High Street.
Walter I. Russell.....	98 Shelton Ave.
George Goldman.....	314 George Street.
William P. Lang.....	1223 Chapel Street.
Wilda E. Butler.....	223 York Street.
Wm. C. McGuire.....	106 Park Street.
Alexander L. Prince.....	105 Edgewood Avenue.

**Ansonia:**

Louis E. Cooper.  
 Louis H. Wilmot.  
 Edward K. Parmelee.  
 Burton I. Tolles.

**Branford:**

C. W. Gaylord.  
 A. J. Tenney.

**Cheshire:**

Edward W. Karrman.

**Derby:**

Frank N. Loomis.

Royal W. Pinney.

Edward O'R. Maguire.

Frank A. Elmes.

Michael A. Parlato.

Wm. H. Treat.

E. T. Sharpe.

**East Haven:**

Charles W. Holbrook.

**Guilford:**

R. B. West.

**Hamden:**

Walter S. Lay.

**MOUNT CARMEL:**

George H. Joslin.

**Madison:**

Milo P. Rindge.

**Meriden:**

N. Nickerson.  
A. W. Tracy.  
E. T. Bradstreet.  
J. D. Eggleston.  
Edward W. Smith.  
A. H. Fenn.  
E. W. Pierce.  
S. D. Otis.  
F. P. Griswold.  
E. D. Hall.  
H. A. Meeks.  
J. W. H. La Pointe.  
Joseph A. Cooke.  
Louis F. Wheatley.  
Michael J. Sullivan.  
H. DeForest Lockwood.  
James B. Dinnan.  
David P. Smith.  
John T. O'Brien.

**Milford:**

John W. Ives.  
W. J. H. Fischer.

**Naugatuck:**

T. M. Bull.  
William J. Delaney.  
Edwin H. Johnson.  
John J. Carroll.  
James W. Robbins.  
Walter A. Reilly.  
Walter I. Baker.

**North Haven:**

R. B. Goodyear.  
G. S. Higgins.

**Orange—WEST HAVEN:**

J. F. Barnett.  
Charles D. Phelps.  
Victor A. Kowalewski.  
Joseph L. Gilmore.  
James M. Kiernan.  
Ralph DeB. Clarke.

**Seymour:**

F. A. Benedict.  
E. W. Davis.

**Wallingford:**

William S. Russell.  
William P. Wilson.  
Caroline N. Stevens.  
David R. Lyman.  
John H. Buffum.  
J. David McGaughey

**Waterbury:**

F. E. Castle.  
Walter L. Barber.  
C. W. S. Frost.  
C. S. RODMAN.  
J. M. Benedict.  
Carl E. Munger.  
B. A. O'Hara.  
John F. Hayes.  
A. A. Crane.  
P. T. O'Connor.  
John D. Frenay.  
C. A. Hamilton.  
George O. Robbins.  
Charles H. Brown.  
Edward W. Goodenough.  
M. L. Cooley.  
F. G. Graves.  
James L. Moriarty.  
George W. Russell.  
D. J. Maloney.  
Charles A. Monagan.  
H. G. Anderson.

H. E. Hungerford.  
 Nelson A. Pomeroy.  
 Thomas J. Lally.  
 P. J. Dwyer.  
 L. J. Thibault.  
 Wm. A. Goodrich.  
 John E. Farrell.  
 Charles Engelke.  
 Thomas J. McLarney.  
 A. C. Swenson.  
 J. J. McLinden.  
 Michael J. Donahue.  
 Egbert L. Smith.  
 John H. Dillon.  
 John J. Gailey.  
 Isabel Cowan.  
 Arthur Variell.  
 Aletta L. B. Deming.

Theodore F. Bevans.  
 Arthur F. McDonald.  
 Jacob Gancher.  
 Henry K. Hine.  
 Michael J. Lawlor.  
 Edmund Russell.  
 John W. Fruin.  
 Walter L. Barber, Jr.  
 Thos. F. Healy.  
 Patrick J. Brennan.  
 Louis F. Cassidy.  
 John E. Brennan.  
 John F. Hackett.  
 Edward A. Herr.  
 Arthur S. Grant.  
 (E. Windsor Hill)

Total Number, 249.

### NEW LONDON COUNTY.

EDWARD P. BREWER, M.D., Norwich, *President*.

WILLIAM H. GRAY, M.D., Mystic, *Vice President*.

E. OLIVER WINSHIP, M.D., New London, *Secretary*.

*Councilor*—PATRICK J. CASSIDY, M.D., Norwich.

*Censors*—RUSH W. KIMBALL, M.D., EDMUND P. DOUGLASS, M.D.,  
 JOHN G. STANTON, M.D.

Annual Meeting, First Thursday in April; Semi-Annual, First  
 Thursday in October.

#### Baltic:

James G. Burr.

#### East Lyme—NIANTIC:

Frederick H. Dart.  
 Edward Atkinson.

#### Griswold—JEWETT CITY:

George H. Jennings.

Alphonse Fontaine.

(Moosup)

Robert R. Agnew.

#### Groton:

Edmund P. Douglass.  
 Frank W. Hewes.

#### NOANK:

William M. Hill.

**Montville:**

Frank E. Wilson.

**UNCASVILLE:**

Morton E. Fox.

**COLCHESTER:**

Edw. J. Howland.

**New London:**

Abiel W. Nelson.

JOHN G. STANTON.

Charles B. Graves.

Harold H. Heyer.

Carlisle F. Ferrin.

Thomas W. Rogers.

J. Clifton Taylor.

Harry M. Lee.

Emmanuel A. Henkle.

Edwin C. Chipman.

Gurdon S. Allyn.

Daniel Sullivan.

Joseph M. Ganey.

James L. Harrington.

Ernest O. Winship.

William D. Cronin.

Henry A. Rogers.

Frank M. Dunn.

Stuart J. Lawson.

Herbert K. Thoms.

**Lyme:**

Ellis K. Devitt.

**Norwich:**

Wm. S. C. Perkins.

Patrick Cassidy.

LEONARD B. ALMY.

Anthony Peck.

Edward P. Brewer.

Newton P. Smith.

Witter K. Tingley.

William T. Browne.

Rush W. Kimball.

James J. Donahue.

Harry E. Higgins.

Charles H. Perkins.

Dennis J. Shahan.

Patrick J. Cassidy.

Edward J. Brophy.

Leone F. LaPierre.

William B. Casey.

Chas. C. Gildersleeve.

**TAFTVILLE:**

George Thompson.

**YANTIC:**

Herbert H. Howe.

**Stonington:**

George D. Stanton.

Charles M. Williams.

**MYSTIC:**

Louis M. Allyn.

William H. Gray.

Alexander M. Purdy.

**OLD MYSTIC:**

Albert T. Chapman.

**Waterford:**

George M. Minor.

Total Number, 60.

## FAIRFIELD COUNTY.

HARRIS F. BROWNLEE, M.D., Danbury, *President*.

GEO. H. NOXON, M.D., Darien, *Vice President*.

ELI B. IVES, M.D., Bridgeport, *Secretary*.

*Councilor*—SAMUEL M. GARLICK, M.D., Bridgeport.

*Censors*—H. E. SMYTH, M.D., W. L. GRISWOLD, M.D., J. D. GOLD, M.D.

Annual Meeting, Second Tuesday in April, at Bridgeport;

Semi-Annual, Second Tuesday in October.

## Bridgeport:

Andrew J. Smith.....	193 Barnum Avenue.
GEORGE L. PORTER.....	372 State Street.
N. E. WORDIN.....	213 Courtland Street.
F. M. Wilson.....	834-836 Myrtle Avenue.
F. B. Downs.....	906 Lafayette Street.
J. W. Wright.....	808-810-812 Myrtle Avenue.
Charles C. Godfrey.....	340 State Street.
S. M. Garlick.....	474 State Street.
Henry Blodget.....	819 Myrtle Avenue.
J. C. Lynch.....	826 Myrtle Avenue.
C. C. Hoyt.....	1289 State Street.
G. W. Osborn.....	888 Broad Street.
J. R. Topping.....	349 Noble Avenue.
B. W. White.....	477 State Street.
Jacob May.....	1816 North Avenue.
George B. Cowell.....	409 Noble Avenue.
George E. Ober.....	632 Kossuth Street.
D. C. DeWolfe.....	516 Fairfield Avenue.
Henry S. Miles.....	417 State Street.
Fessenden L. Day.....	819 Myrtle Avenue.
Edward Fitzgerald.....	526 East Washington Avenue.
George S. Ford.....	527 State Street.
Frank M. Tukey.....	429 State Street.
William W. Gray.....	346 West Avenue.
James D. Gold.....	839 Myrtle Avenue.
Reuben A. Lockhart.....	760 Washington Avenue.
Frederick J. Adams.....	325 Fairfield Avenue.
W. J. O'Hara.....	361 Barnum Avenue.
David M. Trecartin.....	860 Park Avenue.
Harry W. Fleck.....	897 Lafayette Street.
Thomas L. Ellis.....	332 West Avenue.
Charles R. Townsend.....	446 State Street.

Herbert E. Smyth.....	376	John Street.
J. Murray Johnson.....	385	State Street.
Elmer F. Blank.....	387	Noble Avenue.
Irving L. Nettleton.....	385	Noble Avenue.
Edwards M. Smith.....	340	State Street.
Frank L. Smith.....	2178	Main Street.
David B. Wason.....	329	West Avenue.
Dorland Smith.....	834	Myrtle Avenue.
Frank W. Stevens.....	829	Myrtle Avenue.
George H. Warner.....	849	Myrtle Avenue.
Henry E. Waterhouse.....	426	State Street.
Robert J. Lynch.....	52	Courtland Street.
Charles J. Leverty.....	469	State Street.
Philip W. Bill.....	411	State Street.
Albert J. Roberts.....	430	State Street.
F. Winthrop Pyle.....	528	State Street.
Eli B. Ives.....	561	State Street.
Frank H. Coops.....	411	State Street.
William C. Watson.....	446	Stratford Avenue.
Herman S. Schulz.....	390	State Street.
Nathan T. Pratt.....	1221	Stratford Avenue.
Charles N. Haskell.....	525	State Street.
Morris J. Greenstein.....	107	Benham Avenue.
Philip J. Curran.....	469	State Street.
Giovanni Formichelli.....	48	Walter Street.
James L. Sullivan.....	529	East Main Street.
Robert B. Keane.....	90	N. Washington Avenue.
William C. Bowers.....	336	State Street.
Charles W. Gardner.....	449	State Street.
Charles H. Sprague.....	168	West Liberty Street.
Daniel C. Patterson.....	819	Myrtle Avenue.
George W. Hawley.....	871	Park Avenue.
Florence A. Sherman.....	528	State Street.
William A. LaField.....	233	Fairfield Avenue.
Abraham Bernstein.....	346	State Street.
Nicola M. Sansome.....	519	Pembroke Street.
Benj. B. Finklestone.....	346	State Street.
Bronislaw L. Smykowski.....	683	E. Main Street.
Wm. L. Weadon.....	810	Myrtle Avenue.
Henry B. Lambert.....	411	State Street.

**Bethel:**

A. E. Barber.  
George D. Wight.  
Charles R. Hart.

**Danbury:**

E. A. Stratton.  
W. S. Watson.  
D. Chester Brown.  
H. F. Brownlee.  
George E. Lemmer.  
Charles F. Craig.  
William F. Gordon.  
William T. Bronson.  
Richard M. English.  
Paul U. Sunderland.  
E. J. S. Scofield.  
Joseph W. Walsh.  
Howard D. Moore.  
Samuel F. Mullins.

**Cos Cob:**

Thomas J. Bergin.

**Darien:**

George H. Noxon.

**NOROTON:**

Albert L. House.  
Robert Lauder.

**Fairfield:**

W. H. Donaldson.

**GREENFIELD HILL:**

M. V. B. Dunham.

**GREENS FARMS:**

David W. McFarland.

**Greenwich:**

Frank Terry Brooks.  
Fritz C. Hyde.

William L. Griswold.  
Alvin W. Klein.  
John A. Clarke.  
William Burke.  
Harriet B. Hyde.  
Edward O. Parker.  
Thomas J. O'Donnell.

**RIVERSIDE:**

Charles Smith.

**Brookfield Center:**

Charles A. Ryder.

**Huntington—SHELTON:**

GOULD A. SHELTON.  
Wm. S. Randall.  
Francis I. Nettleton.  
John E. Black.

**Monroe—STEPNEY DEPOT:**

Francis J. Wales.

**STEPNEY:**

Geo. A. Smith.

**New Canaan:**

Myre J. Brooks.  
Edmund J. O'Shaughnessy.  
Charles B. Keeler.  
Albert A. Wheelock.

**Norwalk:**

James G. Gregory.  
R. L. Higgins.  
S. H. Huntington.  
William J. Tracey.  
Arthur R. Turner.  
Jesse M. Coburn.  
Walter Hitchcock.  
Ward S. Gregory.

**SOUTH NORWALK:**

C. G. Bohannan.



L. M. Allen.  
 Henry C. Sherer.  
 Jean Dumortier.  
 Francis I. Burnell.  
 William H. Stowe.

**Redding:**

Ernest H. Smith.

**Ridgefield:**

Russell W. Lowe.  
 William H. Allee.  
 Benn A. Bryon.

**Sound Beach:**

Sarah E. Finch.

**Stamford:**

A. M. Hurlbut.  
 Samuel Pierson.  
 A. N. Phillips.  
 F. Schavoir.  
 Wm. B. Treadway.  
     (R. I.)  
 R. G. Philip.  
 George Sherrill.  
 W. E. Rice.  
 George R. Hertzberg.  
 J. J. Cloonan.  
 Dean Foster.

Donald R. MacLean.  
 Frank H. Barnes.  
 John H. Staub.  
 Richard L. Bohannon.  
 John F. Harrison.  
 Thomas J. Biggs.  
 Ralph W. Crane.  
 W. T. Godfrey.  
 Charles L. Dichter.  
 Walter L. Scofield.  
 Samuel M. Shirk.  
 P. P. Van Vleet.  
 Julius Nemoitin.  
 Charles H. B. Meade.  
 J. Wait Avery.  
 I. F. Carroll.

**Stratford:**

W. B. Cogswell.  
 G. F. Lewis.  
 D. Howland.

**Weston—LYONS PLAINS:**

F. Gorham.

**Westport:**

F. Powers.  
 F. D. Ruland.  
 J. M. Nolan.

Total Number, 170.

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**WINDHAM COUNTY.**

CLARENCE E. SIMONDS, M.D., Willimantic, *President*.  
 CHAS. E. HILLS, M.D., East Killingly, *Vice President*.  
 W. P. STUART KEATING, Willimantic, *Secretary*.  
*Councilor*—SELDON B. OVERLOCK, M.D., Pomfret.  
*Censors*—FRANCIS DOWNING, M.D., WM. H. JUDSON, M.D.,  
 ROBERT C. WHITE, M.D.

Annual Meeting, Third Thursday in April.

**Brooklyn—WAUREGAN :**

A. H. Tanner.

**Danielson:**

RIENZI ROBINSON.

W. H. Judson.

James B. Shannon.

George M. Burroughs.

Joseph N. Perriault.

**Killingly:**

George Barnes.

**EAST KILLINGLY :**

George E. Hill.

**Moosup:**

Charles N. Allen.

W. W. Adams.

Francis Downing.

**CENTRAL VILLAGE :**

James L. Gardner.

**Plainfield—**

Arthur A. Chase.

**Pomfret:**

S. B. OVERLOCK.

**Putnam:**

John B. Kent.

F. A. Morrell.

Omer LaRue.

Warren W. Foster.

Henry R. Lowe.

Marguerite J. Bullard.

Edward F. Perry.

Joseph N. Landry.

**Thompson:**

Robert C. Paine.

**Windham:**

F. E. Guild.

**Willimantic:**

Frederick Rogers.

T. R. Parker.

R. C. White.

Laura H. Hills.

Joseph A. Girouard.

Clarence E. Simonds.

Owen O'Neil.

Charles H. Girard.

J. H. Egbert.

Louis I. Mason.

W. P. Stuart Keating.

Charles A. Jenkins.

**Woodstock—EAST WOODSTOCK :**

Ernest R. Pike.

Total Number, 37.

**LITCHFIELD COUNTY.**FRANCIS S. SKIFF, M.D., Falls Village, *President.*ELIAS PRATT, M.D., Torrington, *Vice President.*ROBERT HAZEN, M.D., Thomaston, *Secretary.**Councilor*—ELIAS PRATT, M.D., Torrington.*Censors*—WM. S. HULBERT, M.D., I. L. HAMANT, M.D.,

GEO. H. KNIGHT, M.D.

Annual Meeting, Second Thursday in April; Semi-Annual, Second  
Thursday in October.

**Canaan—FALLS VILLAGE:**

Francis S. Skiff.

**Cornwall—WEST CORNWALL:**

Joseph Robinson.

**Goshen:**

J. H. North.

**Litchfield:**

J. T. Sedgwick.

John L. Buel.

Charles N. Warner.

Charles I. Page.

Nelson L. Deming.

Charles H. Turkington.

R. A. Marcy.

**New Hartford:**

Josiah Swett.

**New Milford:**

George E. Staub.

George H. Wright.

B. E. Bostwick.

**New Preston:**

Howard G. Stevens.

**Norfolk:**

John C. Kendall.

I. L. Hamant.

Lucius D. Bulkley.

Frederick S. Dennis.

A. W. Pinney.

**North Canaan—CANAAN:**

John G. Adam.

Charles W. Camp.

Frank H. Lee.

Henry S. Turrill.

**Plymouth—TERRYVILLE:**

W. W. Wellington.

Richard J. Lawton.

**Roxbury:**

Louis J. Pons.

**LAKEVILLE:**

William Bissell.

William B. Bissell.

**Sharon:**

Clarence W. Bassett.

Jerome S. Chaffee.

**Thomaston:**

Robert Hazen.

Ralph S. Goodwin.

James J. Kane.

**Torrington:**

William L. Platt.

Elias Pratt.

Jerome S. Bissell.

James D. Hayes.

Abram J. Barker.

Charles H. Carlin.

Sanford H. Wadhams.

H. D. Moore.

William J. Hogan.

Timothy M. Ryan.

Harry B. Hanchett.

George Streit.

Daniel P. Platt.

Herbert C. Oelschlegel.

**Washington:**

Frederic W. Wersebe.

**Watertown:**

Ernest K. Loveland.

**Winchester—WINSTED:**

Edward L. Pratt.  
 William S. Hulbert.  
 Salmon J. Howd.  
 David D. Reidy.  
 Ernest R. Kelsey.  
 Maurice J. Reidy.

**WEST WINSTED:**

William S. Richards.

**Woodbury—HOTCHKISSVILLE:**

William G. Reynolds.  
 Howard S. Allen.

**NORTH STONINGTON:**

Robt. E. Harrington.

Total Number, 60.

**MIDDLESEX COUNTY.**

WILLIAM E. FISHER, M.D., Middletown, *President*.

HOWARD T. FRENCH, M.D., Deep River, *Vice President*.

ARTHUR B. COLEBURN, M.D., Middletown, *Secretary*.

*Councilor*—GEORGE N. LAWSON, M.D., Middle Haddam.

*Censors*—JOHN E. LOVELAND, M.D., MINER C. HAZEN, M.D.,

CUSHMAN A. SEARS, M.D.

Annual Meeting, Second Thursday in April; Semi-Annual, Second Thursday in October.

**Chatham—MIDDLE HADDAM:**

George N. Lawson.

**EAST HAMPTON:**

Albert Field.  
 Frederick T. Fitch.

**Chester:**

Fred S. Smith.

**Clinton:**

David A. Fox.

**Cromwell:**

FRANK K. HALLOCK.  
 Charles E. Bush.  
 Charles A. McKendree.

**Durham:**

Charles E. Zink.

**East Haddam:**

M. W. Plumstead.

**Essex:**

Frederick B. Bradeen.  
 Charles C. Davis.

**Haddam:**

Miner C. Hazen.  
 Leonard J. Lowe.

**Middletown:**

William E. Fisher.  
 Charles E. Stanley.

Henry S. Noble.  
 John E. Bailey.  
 Arthur J. Campbell.  
 Arthur B. Coleburn.  
 J. Francis Calef.  
 John E. Loveland.  
 Kate C. Mead.  
 Daniel A. Nolan.  
 John H. Mountain.  
 Charles B. Young.  
 Jessie W. Fisher.  
 James T. Mitchell.  
 James H. Kingman.  
 Thomas P. Walsh.  
 James Murphy.  
 James M. Keniston.  
 Louis R. Brown.  
 Hamilton Rinde.  
 Sidney A. Lord.  
 Edgar Fauver.  
 William M. Kenna.

**Old Saybrook:**

Calista V. Luther.  
 Irwin Grannis.

**Portland:**

Cushman A. Sears.  
 Frank E. Potter.  
 Dennis L. Glynn.  
 Edward J. Lynch.  
 Charles B. Chedel.

**Saybrook—DEEP RIVER:**

Howard T. French.  
 Arthur M. Pratt.

**Westbrook:**

Emmett J. Lyman.

Total Number, 47.

**TOLLAND COUNTY.**

WRIGHT B. BEAN, M.D., Rockville, *President*.

CYRUS B. NEWTON, M.D., Stafford Springs, *Vice President*.

ELI P. FLINT, M.D., Rockville, *Secretary and Treasurer*.

*Councilor*—THOMAS F. ROCKWELL, M.D., Rockville.

*Censors*—F. L. SMITH, M.D., F. W. WALSH, M.D.,

FREDERICK GILNACK, M.D.

Annual Meeting, Third Tuesday in April; Semi-Annual, Third Tuesday in October.

**Coventry:**

Isaac P. Fiske.

**SOUTH COVENTRY:**

WILLIAM L. HIGGINS.

**Ellington:**

Edw. A. Brace.

**Rockville:**

Frederick Gilnack.  
 Thomas F. Rockwell.  
 Eli P. Flint.  
 Thomas F. O'Loughlin.  
 Frederick W. Walsh.  
 Wright B. Bean.  
 F. M. Dickinson.

**Somers:**

Alonzo L. Hurd:

**Stafford—STAFFORD SPRINGS:**

CYRUS B. NEWTON.

Frank L. Smith.

James Stretch.

John P. Hanley.

**Hebron:**

Cyrus H. Pendleton.

**Mansfield—MANSFIELD DEPOT: : : : : :**

Frederick E. Johnson.

Donald L. Ross.

**MANSFIELD CENTER:**

William E. Cramm.

**Tolland:**

Willard N. Simmons.

Total Number, 20.

OFFICERS OF THE CONNECTICUT STATE MEDICAL  
SOCIETY FROM ITS ORGANIZATION IN 1792  
TO THE PRESENT TIME.\*

PRESIDENTS.

1792	Leverett Hubbard.	1878	Charles M. Carleton.
1794	Eneas Munson.	1879	Alfred R. Goodrich.
1801	James Potter.	1880	Gideon L. Platt.
1803	Thomas Mosley.	1881	William Deming.
1804	Jeremiah West.	1882	William G. Brownson.
1807	John R. Watrous.	1883	Elisha B. Nye.
1812	Mason F. Cogswell.	1884	Benjamin N. Comings.
1822	Thomas Hubbard.	1885	Elijah C. Kinney.
1827	Eli Todd.	1886	Thomas H. Hills.
1829	John S. Peters.	1887	Francis Bacon.
1832	William Buel.	1888	George L. Porter.
1834	Thomas Miner.	1889	Orlando Brown.
1837	Silas Fuller.	1890	Melancthon Storrs.
1841	Elijah Middlebrook.	1891	Charles A. Lindsley.
1843	Luther Ticknor.	1892	Cyrus B. Newton.
1846	Archibald Welch.	1893	Francis D. Edgerton.
1849	George Sumner.	1894	Francis N. Braman.
1851	Rufus Blakeman.	1895	Seth Hill.
1853	Richard Warner.	1896	Rienzi Robinson.
1854	William H. Cogswell.	1897	Ralph S. Goodwin.
1856	Benjamin H. Catlin.	1898	Henry P. Stearns.
1858	Ashbel Woodward.	1899	Charles S. Rodman.
1861	Josiah G. Beckwith.	1900	Leonard B. Almy.
1863	Ebenezer K. Hunt.	1901	John H. Grannis.
1865	Nathan B. Ives.	1902	Gould A. Shelton.
1866	Isaac G. Porter.	1903	Samuel B. St. John.
1867	Charles Woodward.	1904	William H. Carmalt.
1868	Samuel B. Beresford.	1905	{ †Edward H. Welch. Nathaniel E. Wordin.
1869	Henry Bronson.	1906	
1870	Charles F. Sumner.	1907	William L. Higgins.
1871	Gurdon W. Russell.	1908	Everett J. McKnight.
1872	Henry W. Buel.	1909	Seldom B. Overlock.
1873	Ira Hutchinson.	1910	Samuel D. Gilbert.
1874	Lowell Holbrook.	1911	Frank K. Hallock.
1875	Pliny A. Jewett.	1912	John G. Stanton.
1876	Ashbel W. Barrows.	1913	E. T. Bradstreet.
1877	Robert Hubbard.		D. Chester Brown.

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\* Prepared for the Secretary by Dr. J. B. Lewis, Hartford.

† Resigned.



## VICE PRESIDENTS.

1792	Eneas Munson.	1879	Gideon L. Platt.
1794	Elihu Tudor.	1880	William Deming.
1796	James Potter.	1881	William G. Brownson.
1801	Thomas Mosley.	1882	Elisha B. Nye.
1803	Jeremiah West.	1883	Benjamin N. Comings.
1804	Jared Potter.	1884	Elijah C. Kinney.
1806	John R. Watrous.	1885	Samuel Hutchins.
1807	Mason F. Cogswell.	1886	Francis Bacon.
1812	John Barker.	1887	George L. Porter.
1813	Timothy Hall.	1888	Orlando Brown.
1814	Thomas Hubbard.	1889	Charles J. Fox.
1822	Eli Todd.	1890	Charles A. Lindsley.
1824	Eli Ives.	1891	Cyrus B. Newton.
1827	John S. Peters.	1892	Francis D. Edgerton.
1829	William Buel.	1893	Francis N. Braman.
1832	Thomas Miner.	1894	Seth Hill.
1834	Silas Fuller.	1895	Rienzi Robinson.
1837	Elijah Middlebrook.	1896	Ralph S. Goodwin.
1841	Luther Ticknor.	1897	Henry P. Stearns.
1843	Archibald Welch.	1898	Charles S. Rodman.
1846	Dyer T. Brainard.	1899	Leonard B. Almy.
1847	George Sumner.	1900	John H. Grannis.
1849	Rufus Blakeman.	1901	Gould A. Shelton.
1851	Richard Warner.	1902	Samuel B. St. John.
1853	William H. Cogswell.	1903	William H. Carmalt.
1854	Benjamin H. Catlin.	1904	Edward H. Welch.
1856	Ashbel Woodward.	1905	{ Frederick A. Morrell.
1858	Josiah G. Beckwith.		{ Eli P. Flint.
1861	Ebenezer K. Hunt.	1906	{ Charles E. Brayton.
1863	Nathan B. Ives.		{ Franklin P. Clark.
1865	Isaac G. Porter.	1907	{ Miner C. Hazen.
1866	Charles Woodward.		{ Irving L. Hamant.
1867	Samuel B. Beresford.	1908	{ Samuel D. Gilbert.
1868	Henry Bronson.		{ Walter L. Barber.
1869	Charles F. Sumner.	1909	{ Theodore R. Parker.
1870	Gurdon W. Russell.		{ William J. Tracey.
1871	Henry W. Buel.	1910	{ Edmund P. Douglas.
1872	Ira Hutchinson.		{ Edward T. Bradstreet.
1873	Lowell Holbrook.	1911	{ D. Chester Brown.
1874	Pliny A. Jewett.		{ Ralph C. Paine.
1875	Ashbel W. Barrows.	1912	{ Frederick Gilnack.
1876	Robert Hubbard.		{ Alvin E. Barber.
1877	Charles M. Carleton.	1913	{ William S. Hulbert.
1878	Alfred R. Goodrich.		{ Kate C. Mead.

## SECRETARIES.

1792	Jared Potter.	1843	Ralph Farnsworth.
1794	James Clark.	1844	Worthington Hooker.
1796	Daniel Sheldon.	1846	Gurdon W. Russell.
1798	Nathaniel Perry.	1849	Josiah G. Beckwith.
1800	Samuel Woodward.	1858	Panet M. Hastings.
1801	William Shelton.	1862	Leonard J. Sanford.
1805	John Barker.	1864	Moses C. White.
1810	Eli Ives.	1876	Charles W. Chamberlain.
1813	Joseph Foot.	1883	Samuel B. St. John.
1817	Jonathan Knight.	1889	Nathaniel E. Wordin.
1827	Samuel B. Woodward.	1905	Walter R. Steiner.
1830	George Sumner.	1912	Wilder Tileston.
1832	Charles Hooker.	1913	Marvin McR. Scarbrough.
1838	Archibald Welch.		

## TREASURERS.

1792	John Osborn.	1829	Joseph Palmer.
1793	Jeremiah West.	1834	Elijah Middlebrook.
1794	John Osborn.	1837	Luther Tichnor.
1796	Mason F. Cogswell.	1841	Virgil Maro Dow.
1800	William B. Hall.	1851	George O. Sumner.
1808	Timothy Hall.	1863	James C. Jackson.
1813	Richard Ely.	1876	Francis D. Edgerton.
1816	Thomas Miner.	1883	Erastus P. Swasey.
1817	John S. Peters.	1889	William W. Knight.
1827	William Buel.	1905	Joseph H. Townsend.

# ALPHABETICAL LIST

OF THE

## MEMBERS OF THE CONNECTICUT STATE MEDICAL SOCIETY,

*With Date and Place of Graduation, and Post-Office Address.*

In preparing this list the Secretary has followed the list in the Proceedings of 1892, made with great care and labor by Dr. J. B. Lewis for the Centennial year. It may be relied upon as being correct.

---

Abrams, Alva Elnathan.....	Albany, '81.....	Hartford.
Adam, John Geikie.....	Trinity, Tor., '00.....	North Canaan.
Adams, Frederick Joseph.....	Univ. N. Y., '95.....	Bridgeport.
Adams, Henry Eli.....	Yale, '02.....	Hartford.
Adams, William Waldo.....	Bellevue, '91.....	Moosup.
Agnew, Robert Robertson.....	Yale, '08.....	Jewett City.
Alcorn, Thomas Grant.....	P. & S., Boston, '97....	Thompsonville.
Alcott, Ralph Waldo Emerson.....	U. S. Med. Coll., '81..	West Hartford.
Allee, William Hanford.....	P. & S., N. Y., '99.....	Ridgefield.
Allen, Charles Noah.....	Univ. Vt., '81.....	Moosup.
Allen, Howard Oliver.....	Univ. N. Y., '79.....	Broad Brook.
Allen, Howard S. ....	Yale, '04.....	Woodbury.
Allen, Lauren Melville.....	P. & S., N. Y., '80....	South Norwalk.
Allen, Millard Fillmore.....	Med. Chi., Phila., '95....	New Haven.
Alling, Arthur Nathaniel, B.A., Yale, '86....	P. & S., N. Y., '91.....	New Haven.
Allyn, Gurdon Spicer.....	Univ. Pa., '03.....	New London.
Allyn, Louis Maxson.....	Univ. Pa., '93.....	Mystic.
Almy, Leonard Ballou, B.A., Yale '73.....	Bellevue, '76.....	Norwich.
Alton, Charles De Lancey.....	Bellevue, '75.....	Hartford.
Altshul, Henry.....	P. & S., N. Y., '87.....	Hartford.
Anderson, Arvid.....	Univ. Mich., '93.....	New Britain.
Anderson, Henry Gray.....	P. & S., N. Y., '89.....	Waterbury.
Arnold, Ernest Hermann.....	Yale, '94.....	New Haven.
Arnold, Harold Sears, B.A., Yale, '00.....	Yale, '03.....	New Haven.
Atkinson, Edward.....	Univ. Vt., '93.....	Niantic.
Avery, John Waite.....	Univ. Vt., '97.....	Stamford.
Axtelle, John Franklin.....	L. I. Hosp. Coll., '71.....	Hartford.
Backus, Harold Simeon.....	L. I. Hosp. Coll., '03....	Broad Brook.
Bacon, Leonard Woolsey, B.A., Yale, '88....	Yale, '92.....	New Haven.
Bailey, George Cornelius.....	Univ. N. Y., '86.....	Hartford.
Bailey, John Elmore.....	P. & S., N. Y., '85.....	Middletown.
Bailey, Michael Angelo.....	P. & S., Balt., '93.....	Hartford.
Baker, Walter I. ....	Hahnemann, Phila., '98....	Naugatuck.
Barber, Alvin Elizur.....	Berkshire, '54.....	Bethel.

- Barber, Walter Lewis.....Bellevue, '73.....Waterbury.  
 Barber, Walter Lewis, Jr., A.B., Yale, '03....N. Y. Univ. & Bellevue, '07, Waterbury.  
 Barihault, Arthur Octave.....Vict. Med. Coll., '89.....New Haven.  
 Barker, Abram James.....Bellevue, '97.....Torrington.  
 Barnes, Frank Hazelhurst.....N. Y. Homeo. Med., '96.....Stamford.  
 Barnes, George.....Univ. N. Y., '04.....Killingly.  
 Barnes, Wm. Samuel, Ph.B., Yale, '95.....Yale, '97.....New Haven.  
 Barnett, John Frederick.....Yale, '69.....West Haven.  
 Barrett, William Joseph.....Md. Med., '04.....New Haven.  
 Barrows, Benj. Safford, Ph.B., '83.....Univ. N. Y., '87.....Hartford.  
 Bartlett, Charles Joseph, B.A., Yale, '92;  
     M.A., Yale, '94.....Yale, '95.....New Haven.  
 Bartlett, William Bradford.....Harvard, '06.....Hartford.  
 Bassett, Clarence Wheeler.....Univ. N. Y., '82.....Sharon.  
 Beach, Charles Coffing, Ph.B., Yale, '77.....P. & S., N. Y., '82.....Hartford.  
 Beach, Charles Thomas.....Yale, '05.....Hartford.  
 Bean, William Hill, Ph.B., Yale, '82.....Yale, '03.....New Haven.  
 Bean, Wright Butler.....P. & S., N. Y., '95.....Rockville.  
 Beck, Frederick George.....Yale, '03.....New Haven.  
 Bell, George Newton.....Yale, '92.....Hartford.  
 Belloso, Frederick.....Yale, '72.....New Haven.  
 Benedict, Frank Allen.....P. & S., N. Y., '87.....Seymour.  
 Benedict, John Mitchell.....Univ. N. Y., '82.....Waterbury.  
 Bergin, Thomas Henry, B.A., Yale, '96.....Yale, '99.....Cos Coh.  
 Bergman, Alexander, B.S., Stockholm.....City of N. Y., '95.....New Haven.  
 Bernstein, Abraham.....Yale, '08.....Bridgeport.  
 Bevans, Theodore F. ....Univ. Minn., '03.....Waterbury.  
 Bickford, Henry.....Penn. Eclectic Med., '68....Hartford.  
 Biggs, Thomas Jacob.....Otis Med., '87.....Stamford.  
 Bill, Philip Worcester, Ph.B., Yale '97.....P. & S., N. Y., '01.....Bridgeport.  
 Birdsong, Julius Lee, B.S., Nashville, '99....Johns Hopkins, '09.....Hartford.  
 Bishop, Frederic Courtney, B.A., Yale, '92....Yale, '95.....New Haven.  
 Bishop, Louis Bennett, B.A., Yale, '86.....Yale, '88.....New Haven.  
 Bissell, Jerome Samuel.....Yale, '94.....Torrington.  
 Bissell, William, B.A., Yale '53.....Yale, '56.....Lakeville.  
 Bissell, William Bascom, A.B., Yale, '88.....P. & S., N. Y., '92.....Lakeville.  
 Black, John Eugene, Ph.B., Yale, '03.....Yale, '08.....Shelton.  
 Blair, Edward Holden.....P. & S., Balt., '06.....Hartford.  
 Blake, Eugene Maurice.....Yale, '06.....New Haven.  
 Blanchard, Irving DeLoss.....Yale, '97.....Hartford.  
 Blank, Elmer Francis.....Starling, '97.....Bridgeport.  
 Blodget, Henry, A.B., Yale, '75.....Bellevue, '81.....Bridgeport.  
 Blumer, George, M.A., Yale, '07.....Cooper Med. Coll., '90....New Haven.  
 Boardman, Alhertus Kellogg.....Univ. Penn., '99.....New Haven.  
 Bodley, George Houghton.....Yale, '07.....New Britain.  
 Bohannon, Charles Gordon.....Univ. N. Y., '78.....South Norwalk.  
 Bohannon, Richard Lee.....Univ. N. Y., '74.....Stamford.  
 Borden, Charles Herhert.....P. & S., N. Y., '96.....Hartford.  
 Bostwick, Benjamin Earle.....L. I. Hosp. Coll., '90....New Milford.  
 Botsford, Charles Porter.....Yale, '94.....Hartford.  
 Boucher, James Joseph.....P. & S., Balt., '04.....Hartford.  
 Boucher, John Bernard .....P. & S., Balt., '94.....Hartford.  
 Bowers, William Cutler.....P. & S., N. Y., '77.....Bridgeport.  
 Boynton, Francis Nichols.....Univ. Mich., '03.....New Haven.  
 Brace, Edward Alfred.....Univ. Vt., '11.....Ellington.

- Brackett, Arthur Stone, B.A., Yale, '92.....Jefferson, '95.....Bristol.  
 Brackett, William Walker.....Jefferson, '96.....New Britain.  
 Bradeen, Frederick Barton.....Univ. Pa., '99.....Essex.  
 Bradley, Mark Spaulding.....P. & S., N. Y., '92.....Hartford.  
 Bradstreet, Edward Thomas, B.A., Yale, '74...P. & S., N. Y., '77.....Meriden.  
 Brainard, Clifford Brewster, Ph.B., Yale, '94...Yale, '98.....Hartford.  
 Brayton, Howard Wheaton, Ph.B., Brown, '06...Harvard, '11.....Hartford.  
 Brennan, John E. ....Georgetown, '05.....Waterbury.  
 Brennan, Patrick Joseph.....Yale, '07.....Waterbury.  
 Brewer, Edward Pliny.....Dartmouth, '79.....Norwich.  
 Bridge, John Law, B.S., Wesleyan, '88;  
     Ph.D., Clark, '94.....Harvard, '03.....Thompsonville.  
 Bronson, William Thaddeus.....Univ. N. Y., '98.....Danbury.  
 Brooks, Frank Terry, B.A., Yale, '90.....L. I. Hosp. Coll., '93.....Greenwich.  
 Brooks, Myre Joel.....Yale, '67.....New Canaan.  
 Brophy, Edward Joseph.....Yale, '04.....Norwich.  
 Brown, Charles Henry.....Univ. N. Y., '93.....Waterbury.  
 Brown, David Chester.....Yale, '84.....Danbury.  
 Brown, Louis Raymond, A.B., Tufts.....Tufts, '07.....Middletown.  
 Browne, William Tyler, Ph.B., Yale, '78.....Harvard, '82.....Norwich.  
 Brownlee, Harris Fenton.....P. & S., N. Y., '88.....Danbury.  
 Bryon, Benn Adelmer .....Bellevue, '90.....Ridgefield.  
 Buel, John Laidlaw.....P. & S., N. Y., '88.....Litchfield.  
 Buffum, John Harold.....Univ. Vt., '98.....Wallingford.  
 Bulkley, Lucius Duncan, A.B., Yale, '66; M.A., P. & S., N. Y., '69.....Norfolk.  
 Bull, John Norris.....P. & S., N. Y., '78.....Plainville.  
 Bull, Thomas Marcus.....P. & S., N. Y., '87.....Naugatuck.  
 Bullard, Marguerite Jane, A.B., Cornell, '02...Cornell Univ., '04.....Putnam.  
 Bunce, Philip Dibble, A.B., Yale, '88.....P. & S., N. Y., '91.....Hartford.  
 Burke, William.....L. I. Hosp. Coll., '96.....Greenwich.  
 Burnell, Francis Edwin.....L. I. Hosp. Coll., '94...South Norwalk.  
 Burr, James Green.....Univ. Balt., '93.....Baltic.  
 Burr, Noah Arthur.....Yale, '01.....South Manchester.  
 Burroughs, George McClellan.....Balt. Med. Coll., '00.....Danielson.  
 Bush, Charles Ellsworth.....Yale, '94.....Cromwell.  
 Butler, Wilda Edwin.....Hahnemann, Phila., '97...New Haven.  
 Butler, William James.....L. I. Hosp. Coll., '95.....New Haven.  
 Buttner, Jacques Louis.....Yale, '09.....New Haven.  
 Caldwell William Ely.....Balt. Med. Coll., '95...West Suffield.  
 Calef, Jeremiah Francis, B.A., Wesleyan, '77...Yale, '80.....Middletown.  
 Camp, Charles Welford.....Univ. N. Y., '74.....Canaan.  
 Campbell, Arthur Joseph.....P. & S., Balt., '85.....Middletown.  
 Campbell, Sheldon Samuel Stratton.....Univ. Vt., '02.....Collinsville.  
 Carlin, Charles Henry.....Univ. Mich., '96.....Torrington.  
 Carmalt, William Henry, M.A., Yale, '81...P. & S., N. Y., '61.....New Haven.  
 Carroll, Isaiah F. ....Balt. Med., '06.....Stamford.  
 Carroll, John James.....Dartmouth, '97.....Naugatuck.  
 Carver, John Preston.....Albany, '96.....Simsbury.  
 Casey, William Bradford.....Univ. Md., '06.....Norwich.  
 Cassidy, Louis Thomas, Georgetown, '04.....Georgetown, '08.....Waterbury.  
 Cassidy, Patrick.....Univ. Vt., '65.....Norwich.  
 Cassidy, Patrick John, B.A., Yale, '94.....Johns Hopkins, '98.....Norwich.  
 Castle, Frank Edwin.....Yale, '70.....Waterbury.  
 Chaffee, Jerome Stuart, Ph.B., Yale, '94.....Univ. Pa., '97.....Sharon.

- Chapman, Albert Taylor.....P. & S., N. Y., '64.....Old Mystic.  
 Cbase, Arthur Alverdo.....Harvard '01.....Plainfield.  
 Chedel, Charles Brigham, A.B., Dartmouth, '03.Dartmouth, '06.....Portland.  
 Cheney, Benjamin Austin, B.A., Yale, '88....Yale, '90.....New Haven.  
 Chester, Thomas Weston, B.A., Rutgers, '92;  
 M.A., '95.....P. & S., N. Y., '95.....Hartford.  
 Chipman, Edwin Clifford, A.B., Alfred Univ. '87.P. & S., N. Y., '91.....New London.  
 Clark, Robert Moses.....Univ. Pa., '91.....New Britain.  
 Clarke, John Alexander.....Bellevue, '97.....Greenwich.  
 Clarke, Ralph DeBallard, A.B., Univ. N. Y., '04.Johns Hopkins, '08.....West Haven.  
 Clary, George, A.B., Dartmouth, '52.....Yale, '57.....New Britain.  
 Clifton, Harry Colman.....Univ. Pa., '01.....Hartford.  
 Cloonan, John Joseph.....P. & S., Balt., '97.....Stamford.  
 Cobb, Albert Edward.....Yale, '98.....Hartford.  
 Coburn, Jesse Milton.....Boston Univ., '74.....Norwalk.  
 Cochran, Levi Bennett.....Univ. Pa., '93.....Hartford.  
 Cogswell, William Badger.....Bellevue, '81.....Stratford.  
 Cohane, Jeremiah Joseph.....Yale, '98.....New Haven.  
 Cohane, Timothy Francis.....Yale, '97.....New Haven.  
 Coholan, Michael James.....Univ. N. Y., '65.....New Britain.  
 Coleburn, Arthur Burr.....P. & S., N. Y., '90.....Middletown.  
 Conklin, James Henry.....Univ. Vt., '99.....Hartford.  
 Converse, George Frederick.....Yale, '87.....New Haven.  
 Coogan, Joseph Albert.....Bellevue, '76.....Windsor Locks.  
 Cook, Ansel Granville.....P. & S., N. Y., '87.....Hartford.  
 Cooke, Joseph Anthony.....Yale, '97.....Meriden.  
 Cooley, Myron Lynus.....Buffalo Univ., '86.....Waterbury.  
 Cooper, Louis Edward, Ph.B., '84.....Yale, '86.....Ansonia.  
 Coops, Frank Harvey, B.A., Dalhousie, '88....P. & S., Balt., '96.....Bridgeport.  
 Cowan, Isabel.....Wom. Med. Coll., N. Y., '92, Waterbury.  
 Cowell, George B. ....P. & S., N. Y., '88.....Bridgeport.  
 Cox, Ralph Benjamin.....McGill, '02.....Collinsville.  
 Coyle, William Joseph.....Buffalo Univ., '85.....Windsor Locks.  
 Craig, Charles Franklin.....Yale, '94.....Danbury.  
 Cramm, William Edward.....Univ. Vt., '95.....Mansfield Center.  
 Crane, Augustus Averill, B.A., Yale, '85....Yale, '87.....Waterbury.  
 Crane, Ralph William.....Yale, '05.....Stamford.  
 Crary, David.....Yale, '69.....Hartford.  
 Cremin, Lawrence M.....Univ. N. Y., '81.....Bridgeport.  
 Cronin, William Daniel.....P. & S., N. Y., '00.....New London.  
 Crossfield, Frederick Solon.....Bellevue, '78.....Hartford.  
 Crothers, Thomas Davison.....Albany, '65.....Hartford.  
 Crowe, Willis Hanford.....P. & S., N. Y., '95.....New Haven.  
 Curran, Philip John.....P. & S., N. Y., '01.....Bridgeport.  
 Curtiss, William Martin Stanley.....Univ. Balt., '93.....Bristol.

- Dart, Frederick Howard.....P. & S., N. Y., '84.....Niantic.  
 Davis, Charles Clarence.....Yale, '07.....Essex.  
 Davis, Elias Wyman, B.A., Yale, '80.....Yale, '92.....Seymour.  
 Davis, Gustav Pierpont, B.A., Yale, '66....P. & S., N. Y., '69.....Hartford.  
 Day, Fessenden Lorenzo, B.A., Bates, '90....Bellevue, '93.....Bridgeport.  
 Deane, Henry Augustus.....Dartmouth, '68.....South Windsor.  
 DeBonis, Domenico.....Naples, '90.....Hartford.  
 DeForest, Louis Shepard, B.A., Yale, '79;

M.A., Yale, '91.....Univ. Jena, '85.....New Haven.



- Delaney, William Joseph.....McGill Univ., '87.....Naugatuck.  
 Deming, Alletta Langdon Bedford, A.B., Cornell. Cornell, '05.....Waterbury.  
 Deming, Nelson L., Ph.B., Yale, '90.....P. & S., N. Y., '93.....Litchfield.  
 Denne, Thomas Harman.....Vermont, '05.....Bloomfield.  
 Dennis, Frederick Shepard, B.A., Yale, '72;  
   M.R.C.S. ....Bellevue, '74.....Norfolk.  
 Devitt, Ellis King.....Univ. Med. Coll., '07.....Lyme.  
 DeWolfe, Daniel Charles.....Univ. Vt., '86.....Bridgeport.  
 Dichter, Charles Levi.....Md. Med. Coll., '05.....Stamford.  
 Dickerman, Wilton Elias, B.A., Amherst, '90..Yale, '93.....Hartford.  
 Dickinson, Francis McLean, Ph.B., Yale, '00..P. & S., N. Y., '05.....Rockville.  
 Dieffendorf, Allen Ross, B.A., Yale '94.....Yale, '96.....New Haven.  
 Dillon, John Henry.....Yale, '04.....Waterbury.  
 Dinnan, James B. ....Yale, '04.....Meriden.  
 Dole, Mary Phylinda, B.S., Mt. Holyoke, '89..Wom. Med. Coll., '88....New Haven.  
 Donahue, Bartholomew Francis.....Yale, '03.....Forestville.  
 Donahue, James Joseph.....P. & S., Balt., '96.....Norwich.  
 Donahue, Michael Joseph.....Univ. Pa., '86.....Waterbury.  
 Donaldson, William Henry.....Univ. N. Y., '81.....Fairfield.  
 Douglass, Edmund Peaslee.....Univ. N. Y., '89.....Groton.  
 Dowd, Michael Joseph.....Balt. Med. Coll., '01..Thompsonville.  
 Dowling, John Francis.....L. I. Hosp. Coll., '90.....Hartford.  
 Down, Edwin Augustus.....P. & S., N. Y., '87.....Hartford.  
 Downing, Francis.....Balt. Med. Coll., '08.....Moosup.  
 Downs, Frederick Bradley.....Univ. N. Y., '78.....Bridgeport.  
 Dumortier, Jean.....Univ. Ghent, Belg., '89, South Norwalk.  
 Dunham, Martin Van Buren.....Harvard, '67.....Greenfield Hill.  
 Dunn, Frank Martin.....Balt. Med. Coll., '08.....New London.  
 Dwyer, Patrick James, A.B., Fordham, '94...Univ. N. Y., '97.....Waterbury.  
 Dwyer, Richard Joseph.....Jeff., Pa., '08.....Hartford.  
  
 Eddy, George William.....Vermont, '04.....Collinsville.  
 Eghert, Jay Hobart, A.B., A.M., Univ. Chicago..P. & S., N. Y., '97.....Willimantic.  
 Eggleston, Jeremiah Dewey.....P. & S., N. Y., '79.....Meriden.  
 Eliot, Gustavus, B.A., Yale, '77; A.M., '82..P. & S., N. Y., '80.....New Haven.  
 Ellis, Thomas Long, B.A., Yale, '94.....Yale, '96.....Bridgeport.  
 Elmer, Edward Oliver .....P. & S., Balt., '94.....Hartford.  
 Elmes, Frank Atwater.....Yale, '05.....Derby.  
 Enders, Thomas Burnham, A.B., Yale, '88....P. & S., N. Y., '91.....Hartford.  
 Engelke, Charles.....P. & S., N. Y., '02.....Waterbury.  
 English, Richard Matthew.....Yale, '98.....Danbury.  
  
 Farrell, John Edward.....Univ. N. Y., '03.....Waterbury.  
 Fauver, Edgar.....P. & S., Columbia, '09...Middletown.  
 Felty, John Wellington, A.M., Emporia,  
   Kan., '97.....Jefferson, '84.....Hartford.  
 Fenn, Ava Hamlin.....P. & S., Balt., '86.....Meriden.  
 Ferrin, Carlisle Franklin, B.A., Univ. Vt., '91..P. & S., N. Y., '95.....New London.  
 Ferris, Harry Burr, B.A., Yale, '87.....Yale, '90.....New Haven.  
 Field, Albert .....L. I. Hosp. Coll., '67..East Hampton.  
 Finch, George Terwilliger, B.A., Hohart, '75;  
   M.A., Hohart, '78.....Bellevue, '77.....Thompsonville.  
 Finch, Sarah Elizabeth.....Cornell, '04.....Sound Beach.  
 Finklestone, Benjamin Brooks.....P. & S., Balt., '10.....Bridgeport.  
 Fischer, Abraham.....N. Y. Univ. & Bell. Hosp., '09, Hartford.



- Fischer, Wm. John Henry.....Yale, '11.....Milford  
 Fisher, Jessie Weston.....Wom. Med. Coll., Pa., '93, Middletown.  
 Fisher, William Edwin.....Univ. Pa., '76.....Middletown.  
 Fiske, Isaac Parsons.....Univ. N. Y., '75.....Coventry.  
 Fitch, Frederick Tracy.....Yale, '04.....East Hampton.  
 Fitzgerald, Charles.....Univ. Vt., '98.....New Haven.  
 Fitzgerald, Edward.....P. & S., Balt., '84.....Bridgeport.  
 Fitzgerald, William Henry.....Univ. Vt., '95.....Hartford.  
 Fleck, Harry Willard.....Jefferson, '96.....Bridgeport.  
 Fleischner, Henry.....Yale, '78.....New Haven.  
 Flint, Eli Percival.....Yale, '79.....Rockville.  
 Flint, Joseph Marshall, B.S., Univ. of Chicago,  
   '95; Princeton, '00; Yale, '07.....Johns Hopkins, '00.....New Haven.  
 Flynn, James Henry Joseph.....Yale, '95.....New Haven.  
 Fontaine, Alphonse.....Laval Univ., '92.....Moosup.  
 Foote, Charles Jenkins, B.A., Yale, '83.....Harvard, '87.....New Haven.  
 Ford, Alice Porter.....Wom. Med. Coll., Pa., '04, New Haven.  
 Ford, George Skiff.....Bellevue, '93.....Bridgeport.  
 Formichelli, Giovanni.....Univ. Italy, '98.....Bridgeport.  
 Foster, Dean, M.A., Univ. Kan.....Yale, '99.....Stamford.  
 Foster, Warren Woden.....Harvard, '82.....Putnam.  
 Fox, David Austin.....Univ. & Belle., '02.....Clinton.  
 Fox, Edward Gager.....Univ. N. Y., '83.....Wethersfield.  
 Fox, Morton Earl.....L. I. Hosp. Coll., '03.....Uncasville.  
 French, Howard Truman.....P. & S., N. Y., '91.....Deep River.  
 Freney, John Daniel.....L. I. Hosp. Coll., '93.....Waterbury.  
 Froelich, Charles Edward, B.A., Copenhagen, '64, Copenhagen, '70.....Hartford.  
 Fromen, Ernst Theodore.....Milwaukee Med. Coll., '97, New Britain.  
 Frost, Charles Warren Selah.....P. & S., N. Y., '80.....Waterbury.  
 Fruin, John William.....L. I. Hosp. Coll., '08.....Waterbury.  
  
 Gailey, John Joseph.....Bowdoin, '98.....Waterbury.  
 Gancher, Jacob.....L. I. Coll. Hosp., '06.....Waterbury.  
 Ganey, Joseph Matthew.....P. & S., N. Y., '04.....New London.  
 Gardner, Charles Wesley.....Univ. Md., '01.....Bridgeport.  
 Gardner, James Lester.....Univ. Vt., '81.....Central Village.  
 Garlick, Samuel Middleton, B.A., Dart., '74, Harvard, '77.....Bridgeport.  
 Gaylord, Charles Woodward, B.A., Yale, '70, Yale, '72.....Branford.  
 Gibbs, Joseph Addison.....P. & S., Chicago, '02.....Suffield.  
 Gildersleeve, Charles Childs.....Yale, '96.....Norwich.  
 Gill, Michael Henry.....Yale, '96.....Hartford.  
 Gillam, William S. ....Univ. Pa., '88.....South Manchester.  
 Gilmore, Joseph L. ....Yale, '04.....West Haven.  
 Gilnack, Frederick.....P. & S., N. Y., '67.....Rockville.  
 Girard, Charles Hermenigilde.....Victoria, '96.....Willimantic.  
 Girouard, Joseph Arthur.....Balt. Med. Coll., '99.....Willimantic.  
 Gladwin, Ellen Hammond.....Wom. Med. Coll., N. Y., '72, Hartford.  
 Glynn, Dennis Lawrence.....Balt. Med. Coll., '02.....Portland.  
 Godfrey, Charles Cartlidge.....Dartmouth, '83.....Bridgeport.  
 Godfrey, William Truitt.....Cornell, '07.....Stamford.  
 Gold, James Douglass, Ph.B., Yale, '88.....P. & S., N. Y., '91.....Bridgeport.  
 Goldberg, Samuel James.....Yale, '07.....New Haven.  
 Goldman, George.....Yale, '10.....New Haven.  
 Gompertz, Louis Michael.....Yale, '96.....New Haven.  
 Goodenough, Edward Winchester, B.A.,  
   Yale, '87.....Yale, '93.....Waterbury.

Goodrich, Charles Augustus, B.S., Mass. Agr.

Coll., '93.....P. & S., N. Y., '96.....Hartford.  
 Goodrich, William Albert.....Med. Chi., Phila., '02.....Waterbury.  
 Goodwin, Ralph Schuyler, Ph.B., Yale, '90.....P. & S., N. Y., '93.....Thomaston.  
 Goodyear, Robert Beardsley.....Yale, '68.....North Haven.  
 Gordon, William Francis.....L. I. Hosp. Coll., '96.....Danbury.  
 Gorham, Frank.....Yale, '76.....Lyons Plains.  
 Grannis, Irwin.....Yale, '96.....Old Saybrook.  
 Grant, Arthur Sheldon.....N. Y. Univ. & Bell., '08.....E. Windsor Hill.  
 Graves, Charles Burr, B.A., Yale, '82.....Harvard, '86.....New London.  
 Graves, Frederick George.....Yale, '92.....Waterbury.  
 Gray, William Henry.....P. & S., N. Y., '89.....Mystic.  
 Gray, William Wetmore, B.S., Dickinson, '85.....Bellevue, '90.....Bridgeport.  
 Greenstein, Morris Jacob.....Univ. South, '06.....Bridgeport.  
 Gregory, James Glynn, B.A., Yale, '65.....P. & S., N. Y., '68.....Norwalk.  
 Gregory, Ward Slosson, Ph.B., Yale, '99.....P. & S., N. Y., '03.....Norwalk.  
 Griggs, John Bagg.....Yale, '97.....Hartford.  
 Griswold, Arthur Heywood, A.B., Harvard, '02.....Johns Hopkins, '06.....Hartford.  
 Griswold, Frederick Pratt.....P. & S., N. Y., '76.....Meriden.  
 Griswold, Julius Egbert.....Univ. N. Y., '79.....Rocky Hill.  
 Griswold, William Loomis, Ph.B., Yale, '81.....P. & S., N. Y., '85.....Greenwich.  
 Guild, Frank Eugene.....L. I. Hosp. Coll., '85.....Windham.

Hackett, John F., Yale, '03.....McGill, '06.....Waterbury.  
 Hall, Edward Dormenio.....Harvard, '73.....Meriden.  
 Hall, Joseph Barnard.....Yale, '92.....Hartford.  
 Hallock, Frank Kirkwood, A.B., Wesleyan, '82;

A.M., '85.....P. & S., N. Y., '85.....Cromwell.  
 Hamant, Irving Louis.....L. I. Hosp. Coll., '90.....Norfolk.  
 Hamilton, Charles Allen.....Univ. Vt., '86.....Waterbury.  
 Hammond, Samuel Mowbray.....Yale, '96.....New Haven.  
 Hanchett, Harry Bigelow.....Jefferson, '05.....Torrington.  
 Hanley, John Patrick.....Cornell, '06.....Stafford Springs.  
 Harrington, Amos Thomas, A.B., Yale, '97.....Harvard, '10.....Hartford.  
 Harrington, James Leon.....Jefferson, '03.....New London.  
 Harrington, Robert E. ....Balt. Med. Coll., '06.....North Stonington.  
 Harrison, John Francis.....Jefferson, '03.....Stamford.  
 Hart, Charles Remington.....P. & S., N. Y., '59.....Bethel.  
 Hartshorn, Willis Ellis, Ph.B., Colo. Coll., '95.....Univ. Minn., '98.....New Haven.  
 Haskell, Charles Nahum.....Univ. Vt., '90.....Bridgeport.  
 Hatheway, Clarence Morris.....Bellevue, '03.....Hartford.  
 Hawkes, William Whitney, B.A., Yale, '79.....Yale, '81.....New Haven.  
 Hawley, George Walter.....Cornell, '99.....Bridgeport.  
 Hayes, James Dermot, B.S., Manhattan

Coll., N. Y. ....Univ. N. Y., '94.....Torrington.  
 Hayes, John Francis.....Univ. N. Y., '79.....Waterbury.  
 Haylett, Howard Bulkley.....Vermont, '07.....Hartford.  
 Hazen, Miner Comstock.....Univ. Mich., '55.....Haddam.  
 Hazen, Robert, A.B., Univ. Vt., '96.....Univ. Vt., '98.....Thomaston.  
 Healey, Thomas Francis.....L. I. Hosp. Coll., '08.....Waterbury.  
 Henkle, Emmanuel Alexander.....Cornell, '99.....New London.  
 Henze, Carl William.....Yale, '00.....New Haven.  
 Hepburn, Thomas Norval, A.B., Randolph

Macon Coll., Va., A.B., '00; A.M., '01.....Johns Hopkins, '05.....Hartford.  
 Herbert, Archibald Cecil.....Univ. Va., '03.....New Haven.

Herr, Edward A., Dartmouth, '06.....	Vermont, '09.....	Waterbury.
Hershman, Abram Aron.....	Yale, '08.....	New Haven.
Hertzberg, George Robert.....	Dartmouth, '99.....	Stamford.
Hessler, Herman Philip.....	Yale, '03.....	New Haven.
Heublein, Arthur Carl.....	P. & S., N. Y., '02.....	Hartford.
Hewes, Frank William.....	Univ. Vt., '94.....	Groton.
Heyer, Harold Hankinson.....	Univ. N. Y., '87.....	New London.
Higgins, Gould Shelton.....	Yale, '01.....	North Haven.
Higgins, Harry Eugene.....	Univ. N. Y., '96.....	Norwich.
Higgins, Royal Lacey.....	Bellevue, '67.....	Norwalk.
Higgins, William Lincoln.....	Univ. N. Y., '90.....	South Coventry.
Hill, Charles Edwin, B.A., Yale, '76.....	Harvard, '79.....	East Killingly.
Hill, William Martin.....	Univ. Va., '97.....	Noank.
Hills, Laura Heath.....	Wom. Med. Coll., '96....	Willimantic.
Hine, Henry Kingsley.....	Md. Med. Coll., '08.....	Waterbury.
Hitchcock, Walter, Ph.B., Yale, '80.....	P. & S., N. Y., '83.....	Norwalk.
Hodgson, Thomas Cady, M.B., Toronto, '94....	Trinity Medical Coll., '94,	East Berlin.
Hogan, William John.....	Yale, '98.....	Torrington.
Holbrook, Charles Werden, M.A., Amherst, '93.	Yale, '96.....	East Haven.
Horton, William Wickham.....	Univ. N. Y., '79.....	Bristol.
Houghton, Simon Willard.....	Bellevue, '79.....	Hazardville.
House, Albert Lewis.....	Yale, '95.....	Noroton.
Howard, Arthur Wayland.....	Univ. N. Y., '90.....	Wethersfield.
Howard, John.....	Dartmouth, '81.....	Hartford.
Howd, Salmon Jennings.....	Jefferson, '83.....	Winsted.
Howe, Herbert H. ....	Univ. Vt., '80.....	Yantic.
Howland, DeRuyter.....	P. & S., N. Y., '06.....	Stratford.
Howland, Edward Joseph.....	Vt. Med., '11.....	Colchester.
Hoyt, Curtis Clark.....	P. & S., N. Y., '87.....	Bridgeport.
Hulbert, William Sharon.....	Univ. N. Y., '80.....	Winsted.
Hungerford, Henry Edward.....	Yale, '98.....	Waterbury.
Huntington, Samuel Henry.....	Yale, '76.....	Norwalk.
Hurd, Alonzo L., B.S., Me., '82.....	Univ. Vt., '91.....	Somers.
Hurlbut, Augustin Moen, B.A., Yale, '76....	P. & S., N. Y., '79.....	Stamford.
Hyde, Fritz Carleton.....	Univ. Mich., '60.....	Greenwich.
Hyde, Harriet Baker.....	Univ. Mich., '00.....	Greenwich.
Hynes, Thomas Vincent.....	Yale, '00.....	New Haven.

Ingalls, Phineas Henry, A.B., Bowdoin, '77;

A.M., '85.....	P. & S., N. Y., '80.....	Hartford.
Irving, Samuel Wellington.....	Yale, '91.....	New Britain.
Ives, Eli Butler.....	Yale, '03.....	Bridgeport.
Ives, John Wagner.....	Yale, '00.....	Milford.

Jarvis, Henry Gildersleeve, A.B., Yale.....	Johns Hopkins, '10.....	Hartford.
Jenkins, Charles Albert.....	Balt. Med. Coll., '11.....	Willimantic.
Jennings, George Herman.....	L. I. Hosp. Coll., '75....	Jewett City.
Johnson, Edwin Hines.....	Univ. Vt., '88.....	Naugatuck.
Johnson, Frederick Eugene.....	Univ. N. Y., '79.....	Mansfield.
Johnson, John Murray.....	L. I. Hosp. Coll., '95.....	Bridgeport.
Joslin, George Harvey.....	Univ. Vt., '87.....	Mt. Carmel.
Judson, William Henry.....	Jefferson, '78.....	Danielson.

Kane, James Hugh .....	Md. Med. Coll., '04.....	Thomaston.
Kane, Thomas Francis.....	Bellevue, '87.....	Hartford.

Karrman, Edward William.....N. Y. Univ., '84.....Cheshire.  
 Keane, Robert Barnabas.....Bellevue, '03.....Bridgeport.  
 Keating, Hugh Francis.....Yale, '08.....New Haven.  
 Keating, Wm. Patrick Stuart.....Jefferson, '99.....Willimantic.  
 Keeler, Charles B. ....Hahn, Chicago, '88.....New Canaan.  
 Keith, Albert Russell, A.B., Colby, '97.....Harvard, '03.....Hartford.  
 Kelsey, Ernest Russell.....Univ. Md., '01.....Winsted.  
 Kellogg, Kenneth Everngbim.....P. & S., N. Y., '98.....New Britain.  
 Kendall, John Calvin, B.A., Yale, '70.....P. & S., N. Y., '75.....Norfolk.  
 Keniston, James Mortimer.....Harvard, '71.....Middletown.  
 Kenna, William Mattbew, Ph.B., Yale, '90.....Yale, '92.....Middletown.  
 Kennedy, Philip Thomas, B.A., Trinity, '05.....Harvard, '09.....Hartford.  
 Kent, John Bryden.....Harvard, '60.....Putnam.  
 Kiernan, Jas. Matthew.....N. Y. Univ., '08.....West Haven.  
 Kilbourn, Clarence Leishman.....Yale, '97.....New Haven.  
 Kilbourn, Joseph Austin.....P. & S., Balt., '97.....Hartford.  
 Kimball, Rush Wilmot, A.B., Williams, '87.....L. I. Hosp. Coll., '90.....Norwich.  
 King, Howard Frost.....Albany, '99.....Windsor.  
 Kingman, James Henry, A.B., Yale, '82.....P. & S., N. Y., '85.....Middletown.  
 Kingsbury, Isaac William, A.B., Harvard, '96.....P. & S., N. Y., '03.....Hartford.  
 Kingsbury, William Sanford.....Yale, '96.....Glastonbury.  
 Kirby, Frank Alonzo.....Columbian Univ., Wash., D. C., '95, New Haven.  
 Klein, Alvin Walter.....Cin. Coll. Med. & Surg., '89, Greenwich.  
 Kleiner, Israel.....Yale, '08.....New Haven.  
 Knight, William Ward.....Univ. N. Y., '76.....Hartford.  
 Kowalewski, Victor Alexander, B.A., Yale, '99.....Yale, '02.....West Haven.

La Field, Arthur Wm. ....N. Y. Homeo., '05.....Bridgeport.  
 Lally, Thomas John.....Albany, '99.....Waterbury.  
 Lambert, Benjamin Lott.....Univ. N. Y., '83.....New Haven.  
 Lambert, Henry Bertram.....Jeff., '09.....Bridgeport.  
 Lampson, Edward Rutledge, A.B., Trinity, '91.....P. & S., N. Y., '96.....Hartford.  
 Landry, Joseph Napoleon.....Laval, '01.....Putnam.  
 Lane, Frederick Pollock.....Yale, '04.....New Haven.  
 Lang, William P. ....Hahnemann, Phila., '01.....New Haven.  
 LaPierre, Leone Franklin.....Yale, '01.....Norwich.  
 La Pointe, John William Henry.....Lavall Univ., Montreal, '92.....Meriden.  
 LaRue, Omar.....Vict., Montreal, '71.....Putnam.  
 Lauder, Robert, M.A., Wesleyan, '89.....Yale, '71.....Noroton.  
 Lawlor, Michael Joseph, Holy Cross, '02.....P. & S., N. Y., '06.....Waterbury.  
 Lawson, George Newton, B.A., Yale, '90.....Yale, '92.....Middle Haddam.  
 Lawson, Stuart Johnston.....Univ. Md., '05.....New London.  
 Lawton, Franklin Lyman, Ph.B., Yale, '90.....Yale, '93.....Hartford.  
 Lawton, Richard J. ....Md. Med., '08.....Terryville.  
 Lay, Walter Sidders.....Yale, '01.....Hamden.  
 Lee, Frank Herbert.....Albany, '88.....Canaan.  
 Lee, Harry Moore.....Columbia, '98.....New London.  
 Lemmer, George Edward.....Bellevue, '85.....Danbury.  
 Levery, Charles Joseph.....N. Y. Univ. & Belle., '01.....Bridgeport.  
 Lewis, Dwight Milton, B.A., Yale, '97.....Johns Hopkins '01.....New Haven.  
 Lewis, George Francis, B.A., '64.....Yale, '65.....Collinsville.  
 Lewis, George Frederick, B.A., Trinity, '77.....Yale, '84.....Stratford.  
 Lewis, John Benjamin.....Univ. N. Y., '53.....Hartford.  
 Linde, Joseph Irving.....Yale, '08.....New Haven.  
 Lindsley, Charles Purdy, Ph.B., Yale, '75.....Yale, '78.....New Haven.

Lockhart, Reuben Arthur.....Yale, '91.....Bridgeport.  
 Lockwood, Howard DeForest.....Yale, '01.....Meriden.  
 Loomis, Francis Newton, B.A., Yale, '81.....Yale, '83.....Derby.  
 Lord, Sidney Archer.....Harvard, '94.....Middletown.  
 Loveland, Ernest Kilburn.....Yale, '97.....Watertown.  
 Loveland, John Elijah, B.A., Wesleyan, '89.....Harvard, '92.....Middletown.  
 Loewe, Leonard J., M.D.V., Harvard, '98.....Tufts, '01.....Haddam.  
 Lowe, Henry Russell.....Dartmouth, '82.....Putnam.  
 Lowe, Russell Walter.....Univ. N. Y., '89.....Ridgefield.  
 Luby, John Francis, Ph.B., Yale, '76.....P. & S., N. Y., '78.....New Haven.  
 Ludington, Nelson Amos.....Yale, '01.....New Haven.  
 Luther, Calista Vinton.....Wom. Med. Coll., Pa., '85, Old Saybrook.  
 Lyman, David Russell.....Univ. Va., '99.....Wallingford.  
 Lyman, Emmett Judson.....Yale, '07.....Westbrook.  
 Lynch, Edward James.....Univ. Pa., '09.....Shelton.  
 Lynch, John Charles.....Univ. N. Y., '86.....Bridgeport.  
 Lynch, Robert Joseph.....Bellevue, '97.....Bridgeport.  
 Lyon, Edwin Bradbury.....Berkshire, '62.....Hartford.  
 Lyon, Treby Williams.....Yale, '03.....New Haven.

MacLean, Donald Robert.....Balt. Med. Coll., '01.....Stamford.  
 Madden, Leon Irving, A.B., Clark.....Harvard, '10.....Hartford.  
 Maguire, Edward O'Reilly.....P. & S., N. Y., '98.....Derby.  
 Maher, James Stephen, Ph.B., Yale, '92.....Yale, '96.....New Haven.  
 Maher, Stephen John.....Yale, '87.....New Haven.  
 Mailhouse, Max, Ph.B., Yale, '76.....Yale, '78.....New Haven.  
 Maloney, Daniel Joseph.....Univ. N. Y., '96.....Waterbury.  
 Maloney, Maurice Washington.....Jeff. Med. Coll., Phil., '97, New Britain.  
 Marcy, Robert A. ....N. Y. Univ. Med. Coll., '82, Litchfield.  
 Mariani, Nicola.....Univ. Naples, '93.....New Haven.  
 Marsh, Arthur Washburn.....Univ. Vt., '82.....New Haven.  
 Martelle, Henry Augustus, A.B., Bowdoin, '01.....Johns Hopkins, '05.....Hartford.  
 Mason, Louis Irving.....P. & S., N. Y., '91.....Willimantic.  
 May, George William.....Milwaukee Med. Coll., '95, So. Manchester.  
 May, Jacob Rush.....Chicago, '76.....Bridgeport.  
 Mayberry, Franklin Hayden.....Univ. Vt., '85.....East Hartford.  
 McCabe, Edward Michael, B.A., Manhattan '83, Yale, '87.....New Haven.  
 McClellan, William Ernest.....Toronto, '04.....Hartford.  
 McCook, John Butler.....P. & S., N. Y., '94.....Hartford.  
 McDermott, Terrance Stephen.....Yale, '98.....New Haven.  
 McDonald, Arthur Francis.....P. & S., N. Y., '05.....Waterbury.  
 McDonnell, Ralph Augustine, B.A., Yale, '90.....Yale, '92.....New Haven.  
 McFarland, David Walter.....Univ. N. Y., '85.....Greens Farms.  
 McGaughey, James David.....Jefferson, '10.....Wallingford.  
 McGuire, William C. ....Yale, '09.....New Haven.  
 McIntosh, Edward Francis.....Yale, '97.....New Haven.  
 McKee, Frederick Lyman.....P. & S., N. Y., '99.....Hartford.  
 McKendree, Charles A., A.B., Dartmouth, '07.....Dartmouth, '10.....Cromwell.  
 McKnight, Everett James, B.A., Yale, '76;

M.A., '77.....P. & S., N. Y., '79.....Hartford.  
 McLarney, Thomas Joseph.....P. & S., Balt., '97.....Waterbury.  
 McLinden, James John.....Univ. Pa., '98.....Waterbury.  
 McNeil, Rollin.....Yale, '62.....New Haven.  
 McPartland, Patrick Farrell.....Balt. Med. Coll., '05.....Hartford.  
 McSweeney, Jeremiah Everett.....Vermont, '91.....Hartford.



- Meade, Charles Havelock Beverly.....Univ. of Louisville, '02.....Stamford.  
 Mead, Kate Campbell.....Wom. Med. Coll., Pa., '88, Middletown.  
 Meeks, Harold Albert.....Bellevue, '90.....Meriden.  
 Miles, Henry Shillingford, Ph.G., N. Y., '88..P. & S., N. Y., '91.....Bridgeport.  
 Miller, George Root.....P. & S., Balt., '86.....Hartford.  
 Miller, William Radley.....Albany, '98.....Southington.  
 Minor, George Maynard.....L. I. Hosp. Coll., '85.....Waterford.  
 Mitchell, James Thomas.....Univ. N. Y., '91.....Middletown.  
 Molumphy, David James.....Jefferson, '06.....Hartford.  
 Monagan, Charles Andrew, B.S., Trinity, '93..Univ. Pa., '98.....Waterbury.  
 Moody, Mary Blair.....Buffalo, '76.....New Haven.  
 Moore, Howard D. ....Hahn., Phila., '93.....Danbury.  
 Moore, Howard Doolittle.....Bellevue, '97.....Torrington.  
 Morgan, William Dennison, A.B., Trinity, '72..P. & S., N. Y., '76.....Hartford.  
 Moriarty, James Ligouri.....Harvard, '96.....Waterbury.  
 Morrell, Frederick Augustus.....L. I. Hosp. Coll., '85.....Putnam.  
 Morrissey, Michael James.....P. & S., Balt., Md., '97...Unionville.  
 Morrissey, William Thomas, B.A.,  
   Holy Cross Coll.,.....Baltimore, '09.....Unionville.  
 Morse, Vernon H. Chipman.....Harvard, '03.....Avon.  
 Moser, Oran Alexander.....Yale, '02.....Rocky Hill.  
 Moulton, Edward Seymour, B.A., Oberlin, '91..Yale, '94.....New Haven.  
 Mountain, John Henry.....Jefferson, '96.....Middletown.  
 Mullins, Samuel Frederick.....Bellevue, '06.....Danbury.  
 Munger, Carl Eugene, Ph.B., Yale, '80.....P. & S., N. Y., '83.....Waterbury.  
 Murphy, James.....Univ. Pa., '95.....Middletown.  
 Murphy, John Aloysius.....N. Y. Univ., '97.....New Haven.  
 Murphy, Walter Graham.....Albany Med. Coll., '90.....Hartford.
- Nadler, Alfred Goldstein, B.A., Yale, '93.....Yale, '96.....New Haven.  
 Naylor, James Henry.....Univ. Vt., '95.....Hartford.  
 Nelson, Abiel Ward.....Harvard, '61.....New London.  
 Nemoitin, Julius.....P. & S., N. Y., '05.....Stamford.  
 Nettleton, Francis Irving, Ph.B., Yale, '94.....Yale, '97.....Shelton.  
 Nettleton, Irving LaField.....L. I. Hosp. Coll., '98.....Bridgeport.  
 Newton, Cyrus Brownlee.....Yale, '56.....Stafford Springs.  
 Nickerson, Nehemiah.....N. Y. Med. Coll., '57.....Meriden.  
 Noble, Henry Smith, A.B., Tufts, '69;  
   LL.D., Tufts, '05.....P. & S., N. Y., '71.....Middletown.  
 Nolan, Daniel Andrew, Ph.G., Phil., '93.....Med. Chir., Phila., '95...Middletown.  
 Nolan, Jacob Matthew.....P. & S., Balt., '94.....Westport.  
 North, Joseph Howard.....L. I. Hosp. Coll., '73.....Goshen.  
 Notkins, Louis Adolph.....Yale, '03.....New Haven.  
 Noyes, Arthur Percy.....Univ. of Penn., '06.....Suffield.  
 Noxon, George Henry.....Balt. Med. Coll., '93.....Darien.
- Ober, George Eugene.....Univ. Vt., '90.....Bridgeport.  
 O'Brien, John T. ....Yale, '09.....Meriden.  
 O'Connell, Timothy Grattan.....Yale, '99.....Bristol.  
 O'Connell, Thomas Smith.....P. & S., Balt., '92.....East Hartford.  
 O'Connor, Matthew Charles, A.B., St.  
   Francis X., N. Y., '69.....P. & S., N. Y., '73.....New Haven.  
 O'Connor, Patrick Thomas.....Bellevue, '92.....Waterbury.  
 O'Donnell, Thomas James.....Syracuse, '08.....Greenwich.  
 Oelschlegel, Herbert Charles.....Jeff., '11.....Torrington.

- O'Flaherty, Ellen Pembroke.....Cornell, '01.....Hartford.  
 O'Hara, Bernard Augustine.....Bellevue, '82.....Waterbury.  
 O'Hara, William James Aloysius.....P. & S., Balt., '93.....Bridgeport.  
 O'Loughlin, Thomas Francis.....Univ. N. Y., '96.....Rockville.  
 O'Neil, Owen.....Jefferson, '04.....Willimantic.  
 Osborn, George Wakeman, B.A., Yale, '84.....P. & S., N. Y., '87.....Bridgeport.  
 Osborne, Oliver Thomas.....Yale, '84.....New Haven.  
 O'Shaughnessy, Edmund Joseph.....Bellevue, '99.....New Canaan.  
 Otis, Samuel Dickinson.....Univ. N. Y., '77.....Meriden.  
 Outerson, Andrew Mansergh.....Jefferson, '06.....Hartford.  
 Outerson, Richard Ambrose.....Jefferson, '02.....Windsor Locks.  
 Overlock, Seldom Burden, B.A., Colby, '86.....Bellevue, '89.....Pomfret.  
 Owens, William Thomas.....Univ. Vt., '99.....Hartford.  
  
 Page, Charles Itbamar.....P. & S., N. Y., '90.....Litchfield.  
 Paine, Robert Child.....Dartmouth, '00.....Tbompson.  
 Park, Charles Edwin.....Yale, '81.....New Haven.  
 Parker, Edward Oliver, A.B., Harvard, '91.....P. & S., N. Y., '96.....Greenwich.  
 Parker, Theodore Raymond.....Univ. N. Y., '80.....Willimantic.  
 Parlato, Michael Antonio.....Yale, '08.....Derby.  
 Parmelee, Edward Kibbe.....L. I. Hosp. Coll., '89.....Ansonia.  
 Patterson, Daniel Cleveland.....P. & S., Balt., '06.....Bridgeport.  
 Peck, Anthony, B.A., Hamilton, '72.....Univ. N. Y., '75.....Norwich.  
 Peck, Robert Ellsworth, Ph.B., Yale, '90.....Yale, '93.....New Haven.  
 Peckham, Lucy Creemer.....Wom. Med. Coll., Pa., '85, New Haven.  
 Pendleton, Cyrus Henry.....Western Reserve, '60.....Hebron.  
 Perkins, Charles Harris.....P. & S., N. Y., '91.....Norwich.  
 Perkins, William Sheldon Clark.....P. & S., N. Y., '60.....Norwich.  
 Perriault, Joseph Napoleon.....Tufts, '07.....Danielson.  
 Perry, Edward Franklin.....L. I. Hosp. Coll., '97.....Putnam.  
 Phelps, Charles Dickinson, B.A., Amherst,  
     '89; M.A., Amherst, '97.....P. & S., N. Y., '95.....West Haven.  
 Phelps, Stuart E. ....McGill, '99.....Farmington.  
 Philip, Rosavelle Gardner.....Wom. Med. Coll., N. Y. Inf., '75, Stamford.  
 Phillips, Alfred Noroton.....P. & S., N. Y., '83.....Stamford.  
 Phillips, Frank Lyman.....Yale, '06.....New Haven.  
 Pierce, Elbridge Worthington.....Univ. N. Y., '85.....Meriden.  
 Pierson, John Corbin.....Tufts, '03.....Hartford.  
 Pierson, Samuel.....P. & S., N. Y., '81.....Stamford.  
 Pike, Ernest Reginald.....Univ. Mich., '98.....East Woodstock.  
 Pinney, Almon William .....Hahn. Med. Coll., Phila., '00, Norfolk.  
 Pinney, Royal Watson.....P. & S., N. Y., '88.....Derby.  
 Pitman, Edwin Parker, B.A., Dart., '86.....Dartmouth, '91.....New Haven.  
 Platt, Daniel Philips, N. Y. Univ. ....Bellevue, '08.....Torrington.  
 Platt, William Logan.....P. & S., N. Y., '81.....Torrington.  
 Plummer, Paul.....Univ. Vt., '94.....Hartford.  
 Pomerstead, Matthew Woodbury.....Jefferson, '87.....East Haddam.  
 Pomeroy, Nelson Asa.....P. & S., N. Y., '96.....Waterbury.  
 Pons, Louis Jacques.....Univ. Vt., '85.....Roxbury.  
 Porter, George Loring, B.A., Brown, '59.....Jefferson, '62.....Bridgeport.  
 Porter, Isaac Napoleon, B.A., Lincoln, '90.....Yale, '93.....New Haven.  
 Porter, William, Jr. ....Chicago Med. Coll., '81 .....Hartford.  
 Potter, Frank Edward .....P. & S., N. Y., '89.....Portland.  
 Potts, Joseph Henry.....Dartmouth, '05.....New Britain.  
 Powers, Frederick.....P. & S., N. Y., '70.....Westport.



- Pratt, Arthur Milon.....Bellevue, '92.....Deep River.  
 Pratt, Edward Loomis.....Univ. N. Y., '84.....Winsted.  
 Pratt, Elias.....P. & S., N. Y., '87.....Torrington.  
 Pratt, Nathan Tolles, A.B., Trinity, '94;  
     M.A., '97.....Yale, '04.....Bridgeport.  
 Prince, Alexander Louis.....Yale, '10.....New Haven.  
 Purdy, Alexander Marshall.....Univ. Mich., '84.....Mystic.  
 Purinton, Charles Oscar, Ph.B., Yale, '97...Yale, '00.....West Hartford.  
 Purney, John.....Balt. Med. Coll., '06.....New Britain.  
 Pyle, Francis Winthrop, A.B., Yale, '97.....P. & S., N. Y., '02.....Bridgeport.  
  
 Ramsay, Otto Gustaf, M.A., Yale, '01, Hon....Univ. Va., '90.....New Haven.  
 Rand, Richard Foster, Ph.B., Yale, '95.....Johns Hopkins, '00.....New Haven.  
 Randall, William Sherman, Ph.B., Yale, '83...P. & S., N. Y., '86.....Shelton.  
 Rankin, Charles Goodrich, A.B., Williams,  
     '84; A.M., '87.....Chicago Med. Coll., '86...Glastonbury.  
 Reeks, Thomas Eben.....Univ. Md., '01.....New Britain.  
 Reidy, David Dillon.....Med. Chi., Phila., '99.....Winsted.  
 Reidy, Maurice J. ....P. & S., N. Y., '10.....Winsted.  
 Reilly, Francis Henry .....Yale, '97.....New Haven.  
 Reilly, James Michael.....Yale, '78.....New Haven.  
 Reilly, Walter A. ....Bellevue, '98.....Naugatuck.  
 Reinert, Emil Gustav.....Balt. Med. Coll., '95.....Hartford.  
 Reynolds, William George.....Yale, '97.....Hotchkissville.  
 Rice, Richard W. ....Coll. Phys. & Surg., South Manchester.  
 Rice, Watson Emmons.....Univ. Mich., '72.....Stamford.  
 Richards, William Spencer.....Univ. N. Y., '89.....West Winsted.  
 Rinde, Hamilton, N. Dakota, '02.....Johns Hopkins, '08.....Middletown.  
 Rindge, Milo Pember.....P. & S., Cleveland, '05.....Madison.  
 Ring, Henry Wilson, A.B., Bowdoin, '79;  
     M.A., Bowdoin, '82.....Me. Med. Coll., '81.....New Haven.  
 Rising, Harry Breed.....Yale, '95.....South Glastonbury.  
 Rising, Henry Martin.....Yale, '68.....South Glastonbury.  
 Robbins, Charles Henry.....Balt. Med. Coll., '95.....New Haven.  
 Robbins, George Orrin.....Yale, '79.....Waterbury.  
 Robbins, James Watson.....Bellevue, '80.....Naugatuck.  
 Roberts, Albert Joseph.....Harvard, '02.....Bridgeport.  
 Robinson, Joseph.....P. & S., N. Y., '98...West Cornwall.  
 Robinson, Myron Potter.....Yale, '95.....Windsor Locks.  
 Robinson, Paul Skiff, Ph.B., Yale, '89.....Yale, '91.....New Haven.  
 Robinson, Rienzi.....L. I. Hosp. Coll., '69.....Danielson.  
 Rockwell, Thomas Francis.....Univ. N. Y., '81.....Rockville.  
 Rodman, Charles Shepard.....P. & S., N. Y., '68.....Waterbury.  
 Rogers, Frederick.....Univ. N. Y., '63.....Willimantic.  
 Rogers, Henry Alexander.....Bellevue, '86.....New London.  
 Rogers, James Frederick.....Yale, '05.....New Haven.  
 Rogers, Thomas Weaver.....P. & S., N. Y., '90.....New London.  
 Ronayne, Frank Joseph.....Yale, '04.....Hartford.  
 Rooney, James Francis.....Balt. Med. Coll., '03.....Hartford.  
 Root, Edward King.....Univ. N. Y., '79.....Hartford.  
 Root, Joseph Edward, B.S., Boston Univ., '76..P. & S., N. Y., '83.....Hartford.  
 Rose, John Henry.....Univ. N. Y., '92.....Hartford.  
 Ross, Donald Laurence.....McGill, '87.....Mansfield Depot.  
 Rowley, Alfred Merriman.....Univ. Vt., '97.....Hartford.  
 Rowley, John Carter.....Harvard, '06.....Hartford.

- Rowley, Robert Lee.....Yale, '03.....Hartford.  
 Ruickoldt, Frederick Arthur.....Jena, '65.....New Haven.  
 Ruland, Frederick Davis.....P. & S., N. Y., '89.....Westport.  
 Russ, Henry Camp, B.A., Yale, '02.....Johns Hopkins, '06.....Hartford.  
 Russell, Edmund.....Univ. of Penn., '04.....Waterbury.  
 Russell, George Washington.....Bellevue, '96.....Waterbury.  
 Russell, Thomas Hubbard, Ph.B., Yale, '72.....Yale, '75.....New Haven.  
 Russell, Walter Irving.....Yale, '09.....New Haven.  
 Russell, William Spencer.....Yale, '80.....Wallingford.  
 Ryan, Joseph Patrick.....P. & S., N. Y., '03.....Hartford.  
 Ryan, Patrick Joseph.....Niagara, '98.....Hartford.  
 Ryan, Timothy Mayher, A.B., Loyola Coll.....Balt. Med. Coll., '02.....Torrington.  
 Ryder, Charles Ambler.....Yale, '98.....Brookfield Center.
- Sanford, Charles Edwin.....Yale, '06.....New Haven.  
 Sanford, Leonard Cutler, B.A., Yale, '90.....Yale, '93.....New Haven.  
 Sanford, Ward Harding.....Balt. Med. Coll., '95.....New Haven.  
 Sansone, Nicola Maria.....Denver Med. Coll., '02.....Bridgeport.  
 Scarbrough, Marvin McRae, B.A., Univ. of  
 Oregon, '02; M.A., Yale, '05.....Yale, '07.....New Haven.  
 Schavoir, Frederick.....P. & S., Balt., '87.....Stamford.  
 Schulz, Herman Samuel.....Hahn., Phila., '01.....Bridgeport.  
 Scofield, Everett J. S. ....Univ. of N. C., '08.....Danbury.  
 Scofield, Walter Lewis.....Univ. Vt., '07.....Stamford.  
 Sears, Cushman Allen.....Univ. N. Y., '62.....Portland.  
 Seaver, Jay Webber, B.A., Yale, '80; M.A., '93.....Yale, '85.....New Haven.  
 Sedgwick, James Theodore.....Univ. N. Y., '85.....Litchfield.  
 Segur, Gideon Cross.....P. & S., N. Y., '82.....Hartford.  
 Shahan, Dennis Joseph.....Univ. Vt., '85.....Norwich.  
 Shannon, James Bernard.....Victoria, '89.....Danielson.  
 Sharpe, Elmer Thomas.....Univ. N. Y., '95.....Derby.  
 Sharpe, Harry Rabe.....Univ. Vt., '00.....Manchester.  
 Sheehan, William Joseph, B.S., Manhattan  
 Coll., '92.....Yale, '95.....New Haven.  
 Shelton, Gould Abijah, M.A., Yale, '91.....Yale, '69.....Shelton.  
 Sherer, Henry Clifford.....Univ. N. Y., '92.....South Norwalk.  
 Sherman, Florence A. ....Wom. Med. Coll., '91.....Bridgeport.  
 Sherrill, George.....P. & S., '91.....Stamford.  
 Shirk, Samuel Martin.....Hahn., Phila., '97.....Stamford.  
 Simmons, Willard Nelson.....Univ. Vt., '89.....Tolland.  
 Simonds, Clarence Eugene.....Univ. N. Y., '97.....Willimantic.  
 Simonson, Louis, Mass. Coll.....Tufts, '08.....Hartford.  
 Simpson, Frederick Thomas, B.A., Yale, '79.....Me. Med. Coll., '84.....Hartford.  
 Skiff, Francis Sands.....Univ. N. Y., '88.....Falls Village.  
 Skinner, Clarence Edward, LL.D.,  
 Rutherford, N. C., '00.....Yale, '91.....New Haven.  
 Slattery, Morris Dove.....Yale, '93.....New Haven.  
 Sloan, Thomas George.....P. & S., N. Y., '99.....South Manchester.  
 Smith, Andrew Jackson.....P. & S., N. Y., '63.....Bridgeport.  
 Smith, Charles.....L. I. Hosp. Coll., '90.....Riverside.  
 Smith, David Parker, A.B., Yale, '10.....Yale, '12.....Meriden.  
 Smith, Dorland, A.B., Yale, '96.....Yale, '99.....Bridgeport.  
 Smith, Earl Terry, M.A., Trinity, '03 Hon.....Yale, '97.....Hartford.  
 Smith, Edwards Montrose.....P. & S., N. Y., '82.....Bridgeport.  
 Smith, Edward Weir, A.B., Yale, '78.....McGill, Mont., '82.....Meriden.

- Smith, Egbert Livingston.....Yale, '96.....Waterbury.  
 Smith, Ernest Herman, A.B., Amherst, '85....P. & S., N. Y., '89.....Redding.  
 Smith, Frank Lewis.....Univ. N. Y., '75.....Stafford Springs.  
 Smith, Frank Llewellyn.....Albany, '83.....Bridgeport.  
 Smith, Frederick Sumner, B.A., Yale, '79.....Yale, '82.....Chester.  
 Smith, George Arthur, A.B., Yale, '03.....Johns Hopkins, '07.....Stepney.  
 Smith, Henry Hubert.....Jefferson, '77.....New Haven.  
 Smith, Newton Phineas.....P. & S., N. Y., '82.....Norwich.  
 Smith, Oliver Cotton.....L. I. Hosp. Coll., '83.....Hartford.  
 Smykowski, Bronislaw Louis.....Balt. Med., '11.....Bridgeport.  
 Smyth, Herbert Edmund.....McGill Univ., '84.....Bridgeport.  
 Sperry, Frederick Noyes.....Yale, '94.....New Haven.  
 Spier, Seymour Leopold.....Yale, '04.....New Haven.  
 Sprague, Charles Harry.....P. & S., N. Y., '04.....Bridgeport.  
 Standish, Frank Billings.....Yale, '03.....New Haven.  
 Standish, James Herbert.....Univ. N. Y., '95.....Hartford.  
 Stanley, Charles Everett.....Univ. Pa., '76.....Middletown.  
 Stanton, George Dallas.....Bellevue, '65.....Stonington.  
 Stanton, John Gilman, B.A., Amherst, '70....Wurtzburg, '73.....New London.  
 Starr, Robert Sythoss, B.A., Trinity, '97;  
 M.A., '00.....P. & S., N. Y., '01.....Hartford.  
 Staub, George Edwards.....L. I. Hosp. Coll., '93....New Milford.  
 Staub, John Howard.....L. I. Hosp. Coll., '99.....Stamford.  
 Steadman, Willard George.....Bellevue, '74.....Southington.  
 Steele, Henry Merriman, Ph.B., Yale, '94....Johns Hopkins, '02.....New Haven.  
 Steiner, Walter Ralph, A.B., Yale, '92;  
 M.A., Yale, '95.....Johns Hopkins, '98.....Hartford.  
 Stern, Charles Seymour, A.B., C. C. N. Y....Bellevue, '91.....Hartford.  
 Stetson, James Ebenezer.....Yale, '81.....New Haven.  
 Stevens, Caroline North.....Tufts, '98.....Wallingford.  
 Stevens, Frank William.....Yale, '00.....Bridgeport.  
 Stevens, Howard Granson.....Balt. Med. Coll., '04....New Preston.  
 Stoll, Henry Farnum.....P. & S., N. Y., '02.....Hartford.  
 Storrs, Eckley Raynor.....Jefferson, '90.....Hartford.  
 Stowe, William Harvey.....Yale, '88.....South Norwalk.  
 Stratton, Edward Augustus.....Univ. N. Y., '83.....Danbury.  
 Streit, George.....Yale, '01.....Torrington.  
 Stretch, James.....Univ. Coll., Richmond, Va., '02, Stafford Springs.  
 Strosser, Herman.....Univ. Berlin, '84.....New Britain.  
 Sullivan, Daniel.....Univ. N. Y., '97.....New London.  
 Sullivan, Daniel Francis, A.B., Niagara  
 Univ., '89.....Niagara Univ., '91.....Hartford.  
 Sullivan, James Laurence.....P. & S., Balt., '01.....Bridgeport.  
 Sullivan, Jeremiah Bartlett, Yale, '03.....Yale, '06.....New Haven.  
 Sullivan, John Francis, B.A., Yale, '90.....P. & S., N. Y., '94.....New Haven.  
 Sullivan, Michael Joseph.....Cornell, '00.....Meriden.  
 Sunderland, Paul Ulysses.....N. Y. Hom. Med., '94.....Danbury.  
 Swain, Henry Lawrence.....Yale, '84.....New Haven.  
 Swan, Horace Cheney.....Tufts, '03.....Hartford.  
 Swasey, Erastus Perry.....P. & S., N. Y., '69.....New Britain.  
 Swenson, Andrew Clay.....Yale, '02.....Waterbury.  
 Swett, Josiah.....Univ. Vt., '78.....New Hartford.  
 Swett, Paul Plummer.....Univ. N. Y., '04.....Hartford.
- Taft, Charles Ezra.....Harvard, '86.....Hartford.

- Tanner, Alfred Herbert.....Bellevue, '74.....Wauregan.  
 Taylor, John Clifton.....Univ. Mich., '91.....New London.  
 Taylor, Maude Winifred.....Tufts, '05.....Hartford.  
 Teele, Julia Ernestine, A.B., Tabor, '85.....Wom. Med. Coll., Pa., '88, New Haven.  
 Tenney, Arthur John, Ph.B., Yale, '77.....Yale, '83.....Branford.  
 Thibault, Louis Joseph.....Yale, '00.....Waterbury.  
 Thompson, Emma Jane.....Wom. Med. Coll., N. Y. Inf., '96, Hartford.  
 Thompson, George.....Me. Med. Coll., '89.....Taftville.  
 Thompson, Whitefield Nelson, A.B., Bates, '88...Jefferson, '89.....Hartford.  
 Thoms, Herbert King.....Yale, '10.....New London.  
 Tileston, Wilder, Harvard, '95.....Harvard, '99.....New Haven.  
 Tingley, Witter Kinney.....Bellevue, '86.....Norwich.  
 Tinker, William Richard.....Univ. N. Y., '80...South Manchester.  
 Tolles, Burton Isaac, A.B., Yale, '01.....Yale, '04.....Ansonia.  
 Topping, Jacob Reed.....Univ. N. Y., '82.....Bridgeport.  
 Townsend, Charles Rodman.....Albany, '95.....Bridgeport.  
 Townsend, Jos. Hendley, B.A., Yale, '85.....Yale, '87.....New Haven.  
 Townshend, Raynham.....P. & S., N. Y., '05.....New Haven.  
 Tracey, Dwight Wallace, Ph.B., Yale, '04.....Johns Hopkins, '08.....Hartford.  
 Tracey, William Joseph.....Univ. N. Y., '89.....Norwalk.  
 Tracy, Andrew William.....McGill, '73.....Meriden.  
 Tracy, Robert Graham.....Yale, '00.....New Haven.  
 Travis, Catherine Hutchison.....Johns Hopkins, '03.....New Britain.  
 Treadway, William Buckingham.....Univ. Mich., '83.....Howard, R. I.  
 Treat, William Howard.....Yale, '06.....Derby.  
 Trecartin, David Munson.....Dartmouth, '94.....Bridgeport.  
 Truex, Edward Hamilton.....Univ. Louisville, '08...East Hartford.  
 Tuoh, Morris.....Bellevue, '06.....Hartford.  
 Tudor, Mary Starr.....Wom. Med. Coll., Pa., '93...Burnside.  
 Tukey, Frank Martin, B.A., Bowdoin, '91...Harvard, '94.....Bridgeport.  
 Turbert, Edward Joseph.....Balt. Med. Coll., '04.....Hartford.  
 Turkington, Charles Henry, Ph.B., Yale, '03...Johns Hopkins, '07.....Litchfield.  
 Turner, Arthur Robert, A.B., Amherst, '84...Univ. Paris, '94.....Norwalk.  
 Turrill, Henry Smith, Ph.B., Yale, '06.....Yale, '10.....Canaan.  
 Tuttle, Charles Alling, Ph.B., Yale, '88.....Yale, '90.....New Haven.  
 Tyler, Heman Augustin, Jr. ....Yale, '98.....Hartford.
- Vail, George Francis, B.S., Villanova, '98...Univ. Pa., '02.....Hartford.  
 VanStrander, William Harold.....Univ. Vt., '00.....Hartford.  
 Van Vleet, Peter P. ....Bellevue, '69.....Stamford.  
 Variell, Arthur.....Bowdoin, '94.....Waterbury.  
 Varno, Henry George.....P. & S., Balt., '82...Thompsonville.  
 Verdi, William Francis.....Yale, '94.....New Haven.
- Wadhams, Sanford Hosea.....Yale, '96.....Torrington.  
 Waite, Frank Louis.....Bellevue, '88.....Hartford.  
 Wales, Francis Joseph.....N. Y. Univ. '97.....Stepney Depot.  
 Walsh, Frederick William.....P. & S., Balt., '85.....Rockville.  
 Walsh, Joseph William.....P. & S., Balt., '07.....Danbury.  
 Walsh, Thomas Patrick.....Univ. Vt., '02.....Middletown.  
 Ward, James Ward.....P. & S., Balt., '95.....Hartford.  
 Warner, Charles Norton.....Jefferson, '96.....Litchfield.  
 Warner, George Howell.....Yale, '97.....Bridgeport.  
 Wason, David Boughton.....P. & S., N. Y., '00.....Bridgeport.  
 Waterhouse, Henry Edwin.....P. & S., N. Y., '02.....Bridgeport.

- Waterman, Paul.....Cornell, '02.....Hartford.  
 Waters, John Bradford.....Univ. Vt., '90.....Hartford.  
 Watson, William Clark.....L. I. Hosp. Coll., '97.....Bridgeport.  
 Watson, William Seymour.....L. I. Hosp. Coll., '87.....Danbury.  
 Weadon, Wm. Lee.....Va. Med. Coll., '05.....Bridgeport.  
 Weidner, Calvin.....Univ. Ind., '93.....Hartford.  
 Weir, Janet Marshall.....Queen's Univ., Kingston, Ont., '91, Hartford.  
 Welch, George Kellogg.....P. & S., N. Y., '78.....Hartford.  
 Welch, Harry Little, A.B., Yale, '94.....Yale, '97.....New Haven.  
 Welch, Thomas Francis.....Georgetown, '04.....Hartford.  
 Welch, William Collins.....Yale, '77.....New Haven.  
 Weldon, Thomas Henry.....Univ. N. Y., '83.....South Manchester.  
 Wellington, William Winthrop.....Univ. Vt., '89.....Terryville.  
 Wells, Ernest Alden, A.B., Yale, '97.....Johns Hopkins, '01.....Hartford.  
 Wersebe, Frederick William.....Univ. N. Y., '98.....Washington.  
 West, Redfield Benjamin.....Univ. N. Y., '79.....Guilford.  
 Wheatley, Louis Frederick.....Tufts, '03.....Meriden.  
 Wheeler, Frank Henry, B.A., Yale, '80.....Yale, '82.....New Haven.  
 Wheelock, Albert Andrews.....Univ. Vt., '97.....New Canaan.  
 Whipple, Benedict Nolasco.....Yale, '07.....Bristol.  
 White, Benjamin Walker.....L. I. Hosp. Coll., '86.....Bridgeport.  
 White, Robert Creighton.....Univ. Vt., '89.....Willimantic.  
 Whittemore, Edward Reed, A.B., Yale, '98.....P. & S., N. Y., '02.....New Haven.  
 Whittemore, Frank Hamilton.....Bellevue, '74.....New Haven.  
 Wiedman, Otto George.....Univ. Pa., '05.....Hartford.  
 Wight, George DeWitt.....Bellevue, '87.....Bethel.  
 Willard, Frederick Buell, A.B., Univ. Vt., '97.....Univ. Vt., '00.....Hartford.  
 Williams, Charles Mallory.....P. & S., N. Y., '98.....Stonington.  
 Wilmot, Louis Howard.....Univ. N. Y., '91.....Ansonia.  
 Wilson, Frank E. ....Univ. Vt., '11.....Montville.  
 Wilson, Frederick Morse, A.B., Colby, '71.....Harvard, '75.....Bridgeport.  
 Wilson, James Cornelius.....Univ. Vt., '04.....Hartford.  
 Wilson, William Patrick.....P. & S., Balt., '90.....Wallingford.  
 Winne, William Nelson.....N. Y. Univ., '97.....New Haven.  
 Winship, Ernest Oliver.....Univ. Vt., '00.....New London.  
 Witter, Orin Russell.....P. & S., N. Y., '01.....Hartford.  
 Wolff, Arthur Jacob.....Tex. Med. Coll., '76, Bellevue, '83, Hartford.  
 Wooster, Charles Morris.....Univ. N. Y., '79.....Tariffville.  
 Wordin, Nathaniel Eugene, B.A., Yale, '70;  
     M.A., Yale, '72.....Jefferson, '73.....Bridgeport.  
 Wright, Frank Walden.....Bellevue, '80.....New Haven.  
 Wright, George Herman.....P. & S., N. Y., '94.....New Milford.  
 Wright, John Winthrop, A.B., Amherst, '77.....Univ. N. Y., '80.....Bridgeport.  
 Wright, Theodore Goodelle.....Univ. N. Y., '65.....New Britain.  
 Wurtenberg, William Charles, Ph.B., Yale, '89, Yale, '93.....New Haven.  
  
 Yergason, Robert M. ....P. & S., Balt., '09.....Hartford.  
 Young, Charles Bellamy.....P. & S., N. Y., '94.....Middletown.  
  
 Zink, Charles Edwin, A.B., Balt. Univ.....Balt. Univ., '00.....Durham.



















